AMERICAN AGRICULTURIST.

Agriculture is the most healthful, the most useful, and the most noble employment of man.—WASHINGTON.

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TO SUBSCRIBERS.

THE publishers of the American Agriculturist present their compliments to their subscribers, and in answer to the question daily asked, why their papers are not sent, inform them, that the terms of *payment in advance* have not been complied with. In many instances, where adopting the advice of friends, the paper has been sent before pre-payment, it has cost more to collect the bills than they were worth; and in others, payment has been meanly evaded, or, for some trifling or unjust cause, totally refused—again, on a few occasions where renewals were declined, the numbers would be sent back so mutilated as to be worthless. The publishers are disposed to conduct their paper on the most liberal terms possible; but their readers will at once see that so long as the subscription is continued at the low price of only one dollar a year, the whole of this little sum would be absorbed by the trouble and loss attending collections. For this reason they respectfully say, that they cannot continue sending the paper hereafter unless the terms of payment in advance be strictly complied with—and in adhering to their rule, the subscriptions being so numerous, it would give them a great deal of extra trouble to make any exceptions whatever. It is hoped now that this explanation will be satisfactory to all concerned. The publishers have the pleasure of adding, that their subscription list has been steadily on the increase since the first start of the Agriculturist, and that its prospects were never so flattering as at this moment; and it will be their constant endeavor, both in its matter and embellishments, to make it more and more worthy the patronage of the public. They do not think it worth while to indulge in grandiloquent boasts, but prefer to let their work speak for itself, certain that its intrinsic merits will more highly commend it than anything they can add in its praise. Such has been the demand for the present volume, that two editions of the first numbers have already been exhausted, and we shall be compelled this month to go to press with a third.

CULTURE OF POTATOES.

WE rank the potato crop in the United States before wheat, and second only to that of corn, as constituting the food of the people and their domestic stock. How important then that the crop be a good one. We are not going to write an article now upon the particular culture of potatoes, as every farmer understands that sufficiently well for general purposes; but shall merely content ourselves with a few hints on the subject by way of guarding against the rot.

Whatever may be the cause of the rot in potatoes, there is no doubt in our mind, that the application of fresh barnyard manures and animal matter of any kind has a tendency to increase it; and we would therefore avoid the use of them on this crop for a few seasons, till the rot had in some measure disappeared, and apply the manure chiefly to grass and corn. For the potato crop, then, we would plow up a sod just after the grass had well started, and this, with the application of a little plaster, ashes, or guano on the hills near the stalks after the first time hoeing, will be sufficiently rich to produce a good crop. Potatoes raised on a sod are sweeter, more nutritious, and mealy, than those raised by the direct application of rank manures. Crops grown by the latter method are almost invariably watery, and tangy—are eaten with disgust, and have little nutriment in them. The best tasted potatoes we ever raised, and the largest crop obtained, were produced on a piece of sod where the grass had been permitted to grow up till the first week in June. It was then turned over flat, rolled, and harrowed lengthwise with the furrows, and the rows marked out

three feet apart with a light one-horse plow, running three inches deep, being careful not to disturb the sod. The seed was chosen of a medium size, dropped six inches apart in the row, and covered two inches deep with hoes. It was a field of about ten acres. No grass sprung up on it, and very few weeds were seen during the season. Just before the potato vines bloomed, a single horse plow was passed down and up each row, throwing the dirt to the vines, the men following with hoes and rapidly hilling them. In the fall they were dug with the plow, when the sod was found completely rotted, and pulverised beautifully. No doubt the unmolested growth of spring grass facilitated the decomposition of the sod, and added to the growth of the potatoes. The season was rather a wet one, which accelerates decomposition; had it been dry the sod would not have decomposed so well. The first week in June is sufficiently early to plant potatoes for winter and spring use. We have planted as late as the 3d of July and got fair crops, when a warm autumn followed; but this is too late for this climate, and we cannot recommend the practice. Early potatoes should be planted in April. Some think planting unripe seed prevents the rot.

CAUTION IN THE USE OF GUANO.—This manure, especially the Peruvian, is found to be so powerful, that it must be used with great caution. Any plant that it touches in a raw state it will *surely kill*; and it burns the leaves of everything which is watered by its solution. The safest mode of application is thus: Mix it in alternate layers, under cover where the rain cannot get at it, with ten or twenty times its quantity of any fine light, easily pulverized soil. Let it lie thus a week or ten days, or as much longer as one pleases. The soil with which it is mixed attracts and partially absorbs its most powerful salts. When it is wished to use this compost, toss it over carefully and mix it well. It may then be sown broadcast upon grass and grain; put in the hill with corn, potatoes, melons, &c., &c.; or around any crop immediately after the first time hoeing, and again just before the crop fruits. For a solution of guano, put one ounce only to a gallon of water, and then water carefully *around* and not *on* the plants. For steeping seeds previous to planting, four ounces may be enough for a gallon of water; though some say they have used a pound to a gallon with impunity. The African not being quite as strong as the Peruvian, 25 to 50 per cent. more of it may be used, according to the value of its analysis.

MR. PRENTICE'S SALE OF SHORT HORN CATTLE.—In this Number of our paper we give a complete catalogue of this superior herd of cattle. It will be seen that every animal Mr. Prentice owns is put in, and the sale will be positive, without reservation, let the animals bring what they may. There was never such an opportunity offered before in this country to obtain choice animals; and to sell without reserve, we believe, has never been done in England. As we intend being present at the sale, we offer our services in purchasing for such of our friends as may find it inconvenient to attend and bid for themselves. Any instructions they may please to give as to choice of animals, and prices at which to purchase, they may depend upon being faithfully executed.

RAISING PORK.

EVERY farmer knows full well that if he has to winter his pigs, even in the most fertile of corn countries, and cannot get over three cents per pound for the pork, he is losing money; how important then that he keeps such a breed of swine, and feeds them so well, that he can bring the pigs, dropped early in the spring, to weigh from 200 to 300 lbs., in December and January. Let people say what they will about the necessity of having old hogs to make a thick cut of clear pork on the ribs for packing, we know this is all *gammon*. We have seen many a pig fed well from his birth, that would weigh full 250 lbs., and cut four inches thick of clear pork on his sides, at nine to ten months old; and have heard of others weighing 300 lbs., and cutting five inches. Now this is all that is necessary for the navy or Boston fishermen, and more than is desirable by consumers in general. Our best market for pork is England, and the people there prefer it from hogs weighing not over 175 to 200 lbs., and like the lean well mixed with the fat. We would never winter anything but breeders of the swine family, and the moment the pigs were dropped we would commence shoving them with feed till ready for the knife. The farmer who pursues this course will make from 30 to 60 per cent. more on his pork than those who winter their spring pigs. As for autumn pigs, we would not have them. Let the sows breed but once a year.

Three or four years ago we prophesied that the low price of pork would soon make it scarce, and now it is a fact; and by and by, when choice boars will be wanted to improve the breed, they cannot be had, for our farmers are growing careless again in their stock, and breeding helter skelter in every direction. A *pig is getting to be a pig once more* with them—long nose or short—sharp back or round. We advise all those who have good hogs to keep them so. Don't sell and fat the best, keep them for breeders, and fat and sell the poorest. In this way one will be continually improving, and in any event he will have a good breed on hand, always ready for his own use and the benefit of a careless neighbor.

PLANT NEITHER TOO CLOSE NOR TOO FAR APART.

THERE is a happy medium in all things, which it behooves a good farmer to study in planting his various crops. If he plants too far apart, weeds are more certain to take the place of the crop, and he does not get that return from his land and labor which he should do. On the contrary, if he plants too close, there is a continued struggle between the roots of the plants for their food below ground, and their branches and leaves for pure air, and an opportunity of absorbing nourishment from it above ground. The consequence is, that the roots get dry and sticky, and the leaves soft, moist, and weak; they become unhealthy, are covered with mould, or are destroyed by insects. For this reason we are much opposed to sowing anything broadcast which can be drilled. Corn for fodder has been found almost invariably to yield a much larger quantity of stalks and ears in drills than broadcast; the same principle holds good with turnips and other roots; and wheat in drills is not near as liable to rust and mildew as when sown broadcast. Particular regard should be had to this matter in cultivating cabbage, cauliflower, and broc-

coli. Blight, mould, and lice, and other insects, are sure to attack these vegetables when planted too thick; they must have room to pasture their roots in the earth below, and to breathe fresh air in their lungs (the leaves) above, or they will become sick, diseased, and die. There can be no rule for distances—the farmer must be his own judge in these matters. Dwarf Canada corn may be planted for a crop of grain two feet apart, while the tall Virginia must stand at least four. The plants of the delicate little Savoy cabbage may be within a foot of each other, while the large Bergen is crowded if it has not two feet each way to stretch its burly proportions.

THE ROLLER.

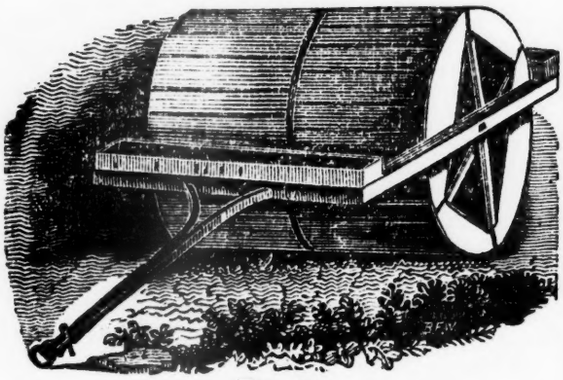


Fig. 36.

It is surprising that so little attention is paid to the use of so serviceable an implement as the roller. It tends to bind a sandy soil, and finely pulverizes the lumps of that of the most adhesive clay. In passing it over recent sown crops, it has a tendency to keep out insects, especially from the turnip crop, as it binds the surface so close that they are not likely to penetrate it. It should always be used after seeding down meadows, as it leaves a much smoother and more level surface for the scythe and rake to pass over. It would be well to pass it over meadows every spring, in order to roll down any upheavings from the frost or poaching of the cattle.

A roller may be made in the most simple manner, from a smooth round white-oak log, 20 to 30 inches diameter. Saw off the ends perpendicular with the surface of the log, and then insert iron gudgeons of about an inch and a half or two inches diameter, and for these to roll in, make a square frame of 4 by 6 inch stuff, boring holes to fit the gudgeons in the side pieces. These are held together by cross pieces, one of which is placed immediately before and the other directly behind the roller. When the roller is made of only one piece, it is hard turning it round at the end of the field; it should therefore be in two distinct cylinders, as shown in the cut. In turning, one then rolls back, while the other moves forward. Three cylinders we have found still better than two, and easier to wheel round. Rollers are usually made in this city of cast iron, two to three feet in diameter, or like the drums for belts to run on to move machinery; that is, narrow segments of wood are fastened on to iron circles. These are much the neatest, and they last a long time. They cost from $20 to $40, dependent on their size and the finish bestowed on them. Four to five feet is the most convenient length, though some make them six to eight. A box is attached to the frame, either over or behind the roller, into which weights are thrown for the purpose of tempering the pressure, as more or less is required according to the facility of crushing the clods and pulverizing the soil. The ground should always be dry when the roller is used, especially in a soil where there is the slightest admixture of clay, otherwise it would so bind the ground together that the crop would find it difficult to shoot up through the surface after germinating.

SHEEP INQUIRIES.

We believe it will be acknowledged that no agricultural journal of the day has gathered together, through the favor of its correspondents, so numerous and valuable a series of articles on sheep husbandry as can be found in the volumes of the Agriculturist. These have been widely copied, and read with interest, and as we are pleased to learn, have effected much good. We wish to pursue this subject still further; and that we may be able to obtain the most reliable information, we earnestly request particular answers to as many of the following inquiries as our readers can answer satisfactorily after shearing their present crop of wool. It is desired that no mixed or grade animal of any description be included in those upon which answers are predicated.

1. How many sheep have you of an improved, *definite, pure breed?* What breed is it? Specify this, and from what English, Spanish, Saxon, or other foreign flock it was derived; the time when it was taken from it, and the characteristics of the breed at that time.

2. What has been the change in the sheep since imported? How have they been managed and bred, and what is their precise present character?

3. What is the present mode of feeding as to quantity and kinds of hay, grass, roots, grain, &c.?

4. At what age do the ewes and rams breed? and how many lambs are averaged to the whole breeding ewes annually? What is the management with breeding ewes and rams, and the lambs?

5. What is the average dead and live weight of ewes, wethers, and rams; also of lambs at 3, 6, 9, and 12 months old? What is the price and weight of the mutton and the tallow by themselves, and *average* weight and largest weight of the whole sheep? In what respects does the quality differ from other mutton? What is the value of the pelts?

6. What was the average weight of fleece at the last or any shearing, washed or unwashed? What was the mode of washing? Specify the number of rams, ewes, wethers, and shorn lambs, that made up the flock, or give weight of each class by themselves. Specify the number of lambs brought up last season by the ewes, and mode of feeding the flock for the year preceding shearing.

7. What was the average price of the wool taken from the pure flock (minutiæ are not objectionable), and where was it sold?

8. What is the average consumption of pure breed sheep (specifying the breed) in comparison with any other breeds you know?

9. What diseases are most prevalent among your flocks, and what are the remedies for the same?

For an idea of the great value that our flocks are soon destined to become to the United States, we would refer the reader to the close of Judge Beatty's article, page 147 of this number of our paper; and

for the ease with which they may be kept at the south, see Mr. Robinson's excellent communication, page 155. If there be any fear among wool growers of overstocking the home market, this will instantly be done away with when they learn what an enormcus consumption there is of the article abroad, to say nothing of the probability of being able to produce more than we can consume in the United States for many years to come. England alone will take all we have to spare for an indefinite length of time, the moment we have a surplus for exportation.

The number of sheep kept in Great Britain and Ireland, in 1838, were estimated by McCulloch at 32,000,000, yielding 124,800,000 lbs. of wool, of which 8,000,000 lbs. were exported. These countries then imported the same year—

From Germany,	27,506,282	lbs.
" Russia,	2,769,102	"
" Rest of Northern Europe,	1,063,074	"
" Spain,	1,814,877	"
" Italy,	1,758,894	"
" Greece,	848,091	"
" Rest of Southern Europe,	1,040,613	"
" Northern Africa,	511,426	"
" Southern Africa,	422,506	"
" Rest of Africa,	1,867	"
" Australia,	7,837,423	"
" East Indies,	1,897,366	"
" South America and Mexico,	4,059,958	"
" North America,	62,976	"
	52,594,355	"

It is supposed the importations of wool into Great Britain and Ireland have been steadily on the increase since 1838, and will amount the present year to full 60,000,000 lbs. Whether the United Kingdom has increased its flocks in an equal ratio with its people during this period, we are unable to say; if so, the wool production there would now be estimated at 137,000,000 lbs. An enormous amount, truly, and almost beyond belief.

INDIAN CORN.

To get a good crop of Indian corn, it must be planted on a naturally rich soil, or one highly manured. Its fine roots are known to run four or five feet when they can thus far insinuate themselves into the ground; it is therefore important to have a deep, well-pulverized tilth for them. Subsoil plowing is highly advantageous for corn. When it comes up, all that is necessary to do, is to work the ground well between the rows and hills with cultivators or plows, it being essential to keep the weeds down and stir the earth well during its growth. When cultivated for fodder, corn should be sown thicker than for grain, as this gives the stalks a more tender and juicy growth. For soiling, it is preferable to sow in drills about one foot apart. When sown broadcast, the plants are apt to choke each other, and the crop presents an uneven, and at times rather an unhealthy growth, in consequence of not getting sufficient sun and air among the stalks.

Fig. 37 is the full grown stalks of the small kind of northern corn.

Fig. 38 is the full grown stalks of the larger kind of northern corn.

Fig. 39, the ears of corn in the husk; the one at the left showing the husk stripped down somewhat from the grain.

Fig. 40 is corn in the ear of three different kinds.

Fig. 37.

Fig. 38.

Fig. 39.

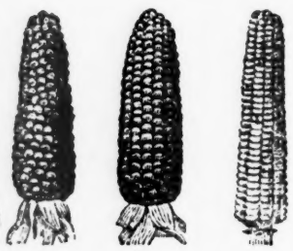


Fig. 40.

We have often regretted that Mr. Webster's proposition of making a treaty with Great Britain for the introduction of corn into her empire, did not meet with a more hearty response on the part of the people of the United States. Mr. Webster's speech on this subject was unfortunately generally misrepresented by both political parties, and it was from the enlightened few only of each that it received a fair consideration. But in properly regarding the matter, this plain question only presents itself to the farmers of our country. Would you not like the privilege of exporting your surplus corn free of duty to Great Britain, if it could be done without compromitting any other important national interest? To this question we fancy we hear an unqualified—"yes, we would." Now, from a hasty perusal of his speech, this was all we understood Mr. Webster to propose in the matter.

Great Britain cannot grow Indian corn—of course she has nothing that will directly compete with it; and we believe, if she were properly approached, she might be induced to admit it into her ports at a mere nominal duty. If she could be prevailed upon to do so, its exportation would be a source of great wealth to the United States, and it would prove an incalculable boon to the people of Great Britain—especially the lower classes, who would soon learn to use it, and make our favorite Indian bread and johnny-cake, hommony, and hasty pudding—fried in American lard, and sweetened with Louisiana and Texas molasses—standing dishes on their tables. The introduction of corn and corn-meal there would put an end to starvation in Ireland on a short crop of potatoes, and in England and Scotland on a short and ill-secured wheat and oat harvest.

CULTIVATION OF BROOM CORN.

Soil.—The best soil for raising broom corn, is similar to that required for Indian corn or maize. It should be rich, warm, loamy land, not liable to early or late frosts. Spring frosts injure broom corn more than maize, as the roots do not strike so deep, nor has it the power of recovering from the effects of frost equal to the latter. The best crops are usually raised on a green sward, turned over as late as possible in the fall, so as to kill all the worms. Clay lands are not suitable for it.

Manure.—Hog or sheep manure is best, and rotten better than unfermented. If the land is in good condition, three cords, or eight loads of manure to the acre is sufficient. This is usually placed in hills: 12 to 15 bushels leached or unleached ashes per acre may be added with great advantage. Plaster is beneficial at the rate of two to four bushels per acre. The addition of slacked lime helps the ground, affords food to the crop, and is destructive to worms. Poudrette at the rate of a gill or so to each hill at planting, or guano at the rate of a heaping tablespoonful per hill, if the African, or two-thirds the quantity if Peruvian, mixed into a compost with ten times its quantity of good soil, is an excellent application, especially if the land is not in very good heart. To repeat either of the above around the stalks on each hill after the last hoeing will add materially to the crop.

Planting.—It should be planted in hills—not drills—two feet apart, in rows two and a half to three feet apart. If the seed is good, 15 to 20 seeds to a hill are enough; if not, put in sufficient to ensure eight or ten thrifty plants, which are all that require to be left for each hill. Time of planting must depend on climate and season. The 1st of May is time for planting in latitude 40°, and 10th to 15th in 42°, but as early as possible, yet late enough to avoid spring frost is best. The ground should be thoroughly harrowed and pulverised before planting. Thick planting gives the finest, toughest brush. Seed should be buried one to one and a half inches deep.

After Culture.—As soon as the plants are visible, run a cultivator between the rows, and follow with a hand hoe. Many neglect this till the weeds get a start, which is highly prejudicial to the crop. The cultivator or a light plow should be used afterwards, followed with a hoe, and may be repeated four or five times with advantage.

Breaking the Tops.—This should be done before fully ripe, or when the seed is a little past the milk; or if frost appears, then immediately after it. This is done by bending over the tops of the rows towards each other, for the convenience of cutting afterwards. They should be broken some 13 inches below the brush, and allowed to hang till fully ripe, when it may be cut and carried under cover, and spread till thoroughly dried.

Disposal of Stalks.—The stalks remaining on the ground may be cut close or pulled up and buried in the furrows for manure, or burnt, and thus be restored to the earth to enrich it; or they may be carried to the barn yard to mix up in a compost, or with the droppings of the cattle.

Cleaning the Brush.—This is best done by hand, by passing it through a kind of hetchel, made by setting upright knives near enough together, or it may be cleaned by a long toothed currycomb. By the first method none of the little branches are broken, and the brush makes a finer, better broom. We have seen horse power machines used for cleaning the seed with great rapidity, in the Miami valley.

Yield of Brush.—The average yield is about 500 lbs. of brush per acre. It varies according to season and soil, from 300 to 1,000 lbs. The price also varies materially, ranging from 3 to 16 cents per lb.: the last seldom obtained unless in extreme scarcity.

Yield of Seed.—A good crop of seed is obtained in the Connecticut valley about two years out of five. When well matured, the seed will average 3 to 5 lbs. for every pound of the brush. A single acre has produced 150 bushels seed, though 25 to 50 is a more common yield. It weighs about 50 lbs. per bushel, and is usually sold at 25 to 35 cents. It is too heating for horses, but valuable for other stock, especially when ground. Some have informed us that for sheep and swine they consider it nearly equal to oats, but we are of opinion, in saying this, it is overrated.

On the Northampton (Massachusetts) meadows 1,500 acres of broom corn are frequently raised per annum, producing brush and seed to the value of $60,000 to $80,000. Some seasons the crop has been worth $100,000. It is now raised in large quantities in the rich valley of the Sciota, and other parts of Ohio. Quite a business is at present done at the west, in sending the brush to England, in order to supply that country with brooms. It is cleaned where raised, and shipped direct to London or Liverpool via New Orleans. The handles are made at the east and shipped from Boston or New York. Twine, wire, and labor being cheaper in England than here, the brooms are made up there and sold in large quantities. American brooms are much admired in Great Britain and Ireland, especially for carpet sweeping, they having nothing like or equal to them. Broom corn is not as exhausting a crop as Indian corn, unless the seed matures, and then it affords a full equivalent for exhaustion. At 6 cents per pound for brush, the former is as profitable to raise as the latter at $1 the bushel.

Farms in New Jersey.—A correspondent from Essex county thus writes us: This is a beautiful section of country, and there are many fine farms, in spite of all our neglect. A few are made so by the industrious husbandmen; and one thing I notice, the best farmers who make them so, do it without any heavy outlay of money. They get out all the manure from their barn-yards, sheds, and pig-sties in the spring, and then cast into the yard soil from the road-gutters, and muck from the swamp, putting as much in the sty as the hogs and pigs will work over during summer. With this they mix ashes, lime, or plaster, in the fall, for their grain crops, or let it remain in the yard for the following spring, thus making them large quantities of manure.

Scab in Sheep.—As I hear much said about the scab in sheep, I send you an account of the treatment of that disease in a flock of about 200, in 1834, that belonged to my father in New Hampshire. The flock had been diseased two years, and several remedies tried and failed. Many sheep died, and but few ewes raised their young. The cure was this: a decoction of tobacco and sulphur; 10 lbs. of good tobacco for 100 sheep, well mashed and steeped in about 16 gallons of water, to which was added 1 lb. sulphur.

Each sheep was taken and put upon a bench or form, so fixed as to save the drippings of liquor from the washing, and rubbed with a hand-swab, made of some kind of cloth, wet in the decoction, being careful to moisten every part of the neck and body of the sheep. This was done immediately after shearing. The lambs also underwent the same washing; but the liquor was made a little weaker for them. Very few of the sheep appeared to be in the least degree sick from the operation. A few of the lambs were so for two or three hours. The washing ought to be done in the fore part of a warm day. The third day after washing, the sheep were salted with common salt, which was wet, and as much sulphur stirred in as would stick to the salt. This flock from this time began to gain, and the next season the fleeces from the same sheep were one-third heavier, and the lambs were healthy; and such seemed to be the benefit derived from the use of tobacco and sulphur, that it is not omitted being done to this time, every spring, only the decoction is made weaker. It keeps the ticks from sheep, and as yet we have not been troubled with any disease in the flock. P. W.

Plainfield, N. J.

DRAINING LAND.

I do not feel myself sufficiently qualified to give you any very elaborate treatise on this subject, neither do I conceive it necessary, as I fear it would be far less acceptable to the large body of *practical* farmers for whom I write, and whom I wish to benefit. But I propose simply to note a few facts, the result of my own observation and experience, on a subject which I conceive to be of vital importance to the farmer's interest. And as a very important branch of farming, one in which nearly all farmers are interested, I wish to particularize, and draw attention to a fact of no little consequence, what I have always conceived, and what *experience* has proved to be bad economy in farming, viz., *to suffer such vast quantities of our lowlands to lie in their natural state without draining.* Everybody knows that *standing water is death to all useful vegetation in this climate;* this fact of itself I hold to be sufficient proof of its decided utility. The draining of marshes and swamps, low meadow land and spongy soils, will tend much to ameliorate the climate of a country, and consequently render it more healthy; besides bringing into cultivation lands comparatively worthless, and rendering the influences of the atmosphere more favorable.

I shall not advise a trip to the everglades of Florida, or to the pestilential swamps of Western Africa, whose pestilential *malaria* sends forth the breath of death on every breeze that crosses its fatal bosom; but I wish the farmer to stay at home, look around his own domicil, at his own meadow, and see if he has not hitherto neglected this important branch of farming; let him commence the work of reformation in earnest, and then go to his neighbor and say, "go thou and do likewise." To reap advantages from draining, like other branches of farming, it must be well done. Cut good, wide, deep ditches into the subsoil, if there is descent enough to carry all the water off, but by no means so deep that you form a sink to hold water. If your neighbor's land is higher than yours, cut a deep ditch along the line fence, if practicable, and parallel with it, and thus arrest water that would otherwise flow on you, and irrigate land that would be better without it. Abandon the idea that by cutting so many ditches here and there, you are wasting just so much land, in taking up too much room with them; this impression is decidedly erroneous. By drying the remainder you render it more light and porous, easier of cultivation, and consequently more productive.

In the month of July last, I observed from my window two mowers cutting a small lot of coarse bog grass on land so wet that they could not keep dry feet. They complained of the crop as hardly worth the cutting, except perhaps for yard litter or very ordinary cow fodder. And well they may. Now these men are poor, and I know that this very hay helps to keep a horse through the winter, the most trying season in our climate for animals. And here I wish my readers to observe is one specimen of the very "bad economy of farming" alluded to above. Farmers well know that healthy and sound horses are entirely out of the question when kept on such miserable food. But enough of this, the ribs of the poor beast will speak for it in the spring.

Now I happen to know that this very identical spot of ground was thoroughly and effectually drained a few years ago, a good deep ditch being cut entirely around it; and that season, and the one following, the most valuable crop of grass was taken from it I ever knew before or since. To effect this, the draining was of course done early in the season, and the surplus water from the early rains—which had formerly been allowed to stand in puddles here and there, and sink in the soil by degrees, thereby completely saturating it—was then carried off by good and efficient ditches. But you ask, "Why has no good crop come from it since?" I will tell you, the matter is easily solved. The draining was done, and I am satisfied, *well* done; but this is not always sufficient. If farmers would be permanently benefited by draining land, they must keep the open ditches well cleared out, that the water may have a free passage, not only to pass off, but pass off quickly; and after a ditch is well opened, a little labor every season will suffice to keep it so. Now, in the above instance, the ditches were never opened but once, consequently they soon became filled up again; and the trouble is, the owner would rather *drain his glass of brandy* than his meadow, which kind of *draining* he understands perfectly; but allow me to add, that kind of draining won't answer for farmers, and if he had as effectually drained his meadow, a large increase of good hay would annually have been added to his store. Draining has done wonders for me, and I only wish the anti "book-farmers" and all doubting minds could visit my nursery, and *see* it, instead of hear tell of it. A few years ago I came into possession of a few acres of ground which were considered profitable for grazing only. It was a cold, neglected, stiff clay soil, with a retentive yellow clay subsoil, so wet that we often could not even *plow* the ground until after many of our neighbors had *planted* theirs. A very uninviting spot for a nursery, you will say. It really was, but it was the *best* we had, However, I had to make the *best* of it, and if every farmer would make the *best* of what he has, we should have far less complaining, less discontent, and less of the "*western mania.*"

I soon conceived the necessity of thorough and

complete draining this wet field, and accordingly employed two hands and one head, which were those of *my own*, and set to work, cutting good wide ditches all around and through it, and set it to "bleeding at every pore;" making "blind ditches" of those that run across the lot, that I might plow over them. The result is, that I have now healthy and thrifty fruit trees growing on land that was much of it wet bog-holes, and we are enabled to cultivate it in good season, weeks earlier than ever before. A single fact will show the importance of draining such land. One ditch runs directly through a low marshy bog-hole (that was), cut deep into the subsoil, the pores of which were filled with water, and the deeper I went the more the water would ooze out. This very spot is now quite dry and mellow, beautiful to work in, and is the richest spot of ground on the whole nursery. My neighbor's land, which joins me, is higher than mine, and sloping towards it, consequently all the surface water is washed from his upon mine. This communication I cut off by making a ditch near and parallel with the line-fence; this answers the desired purpose, and is a benefit to both of us. His land is so peculiarly situated that he can drain to little purpose, unless he turns his drains into mine, which have a free outlet. This I cheerfully allow him to do, and he is now draining to some extent, and intends to do much more. I do not conceive it necessary to lay down any very definite rules on paper for draining land; as, for instance, the length, breadth, or depth of a ditch; the direction in which it should run, &c., &c. Every farm is differently situated. One is high ground, perhaps, best suited for blind drains; another is low ground, and suited for open ditches. A certain course pursued on one farm will not answer for another. Every farmer in this, as well as everything else, should exercise his own judgment, and adapt his efforts to circumstances, then may success and prosperity attend him.

W. D.

Morristown, Morris Co., N. J., March 14, 1845.

REPORT OF THE AGRICULTURAL SURVEY OF SOUTH CAROLINA.—We have received a letter from Edmund Ruffin, Esq., of Virginia, stating that we were mistaken in part of our remarks, in noticing his Report, page 285, Vol. 3. He says, "the obvious inferences from these remarks are, that the close of my services was compelled by the repeal of the law authorizing their being employed; and that otherwise I would have continued to serve longer, as during the previous year. The reverse was true in both respects. When, without my solicitation or knowledge, I was offered the appointment of Agricultural and Geological Surveyor of the State, and before accepting the honorable charge, I distinctly stated in my answer to the Governor, that my time could not be so given longer than for one year. Accordingly, at the end of that year, I resigned the situation. Still the legal term of my service, as expressed in my commission, had been for two years, and the appropriation had been made at first for the full time. And neither was the law repealed, nor the appropriation withdrawn. My friend, M. Tuomey, Esq., was appointed to fill the vacated office, and he completed the unexpired year of my appointed term, devoting himself to the geological department of the survey, for which he is eminently fitted, as exclusively as I had done to the agricultural department. Further, when the full term of two years had been completed, and both the office and the appropriation had ceased, by their first enacted limitation, both were continued by new legislation; and the survey is still in progress, and, as before, in the most worthy charge of Mr. Tuomey."

We were led into the mistake above alluded to by Mr. Ruffin, by a paragraph in a South Carolina exchange paper, which we well recollect spoke very bitterly in its remarks on the niggardliness of the Legislature in providing funds for a continuation of the survey, and that Mr. Ruffin's services must consequently cease. We trust, therefore, we shall be pardoned the error we have unconsciously committed; we supposed the South Carolina paper good authority, and this is the first contradiction of it we have seen. Of course we publish it at once with great pleasure, for we own we were not only mortified, but very much surprised when we read the paragraph stating that the survey must cease. We always entertained a high opinion of the intelligence of the people of South Carolina, and more especially of its eminent citizens then holding offices; and it was this which caused the greater astonishment on our part at the supposed action of the Legislature.

BERMUDA AND COCOA GRASS AND SHEEP IN MISSISSIPPI.

Bermuda Grass.—The cultivation of this grass in the State of Mississippi, I look upon as one of the most important things that can be brought to the notice of the citizens of this State, and probably to most others of the Southern States, where the long continuation of a hot burning sun so completely dries up all other kinds of cultivated grasses, that at that season when grass for pasture or hay is most needed, they will be found more fit to burn than to afford green food; while with the Bermuda, the hotter the sun the more luxuriant the growth; affording not only the finest kind of summer pasture, but yielding an almost inconceivable quantity of excellent hay I am aware that to many of your readers my remarks upon this subject are entirely uninteresting; but I beg of them to consider that there are thousands of others who never saw a spear of this grass growing, and know nothing of its value. Mr. Affleck, of Washington, Miss., who is as well informed upon the subject perhaps as any other person, believes this to be identical with that which forms the beautiful green grassy banks of the river Ganges; and although here only known as Bermuda, that it originally came from the East instead of the West Indies. But be this as it may, it is to the South what Kentucky blue grass is to that State; yet, notwithstanding its vast importance, I have travelled over several counties in Mississippi where it was as completely unknown as if it had never left its original place upon the banks of the "holy river."

One reason why Bermuda grass spreads so slowly is, that it does not bear seed in this country, and consequently is propagated only by the roots and stalks, every joint of which, however, will send up a shoot, and as it grows extends itself with astonishing rapidity both above and below the surface. If set out

upon a piece of ground in hills, two feet apart each way, it will spread over the whole ground in one season. Or it may be set in an easier and more expeditious manner, by taking up the sods and chopping them into small pieces, and sowing them over the ground and covering them with a plow or harrow. The tenacity of life in it is so great, that some people object to admit it upon their land, for fear that they never could get rid of it again. In fact, it would seem that they would prefer to see their land taking its rapid course down the millions of gullies through which some of the finest soil in the world is sweeping its way rapidly towards the Gulf of Mexico, rather than risk the trouble of getting this grass into their cultivated fields.

I grant that this grass is a troublesome customer among corn and cotton; but a crop or two of peas will exterminate it, as it cannot live in a dense shade, and that is what adds to its value. *It grows the best in the hottest sun*, no matter whether on wet or dry soil, hill or dale; keep it free of shade, and it will afford more pasturage or hay than any other cultivated grass in a southern clime. In addition to its invaluable quality for food for stock, whether green or dry, it has in Mississippi another and still greater value. For be it known, this is *the land of gullies*. That the whole of the hill counties have not already floated away, is only because the land has been held together by cane and other roots, which all decay as the land becomes cultivated; and even now before the stumps of the original forest have disappeared from the ground, thousands and tens of thousands of acres have become so gullied that their cultivation is abandoned, and in many cases large tracts are turned out to the common as past all profitable use, and considered by the owners as almost valueless; while the annual accumulation of these waste acres under the present system of cultivation is perfectly astounding to one who has been accustomed to seeing better management. Now the very worst of these waste gullies can be reclaimed into the best of pasture, and the further waste prevented by Bermuda grass alone, and that in one, or at furthest, two years. It will even adhere to the perpendicular sides of banks, and in the bottom of ditches it will grow and collect the wash, and again grow up through the accumulating dirt, and again collect another coat of wash, so that it not only prevents the further waste, but in a measure will fill up many of the smaller gullies already formed.

The Bermuda is an exceedingly valuable grass, and ought to be cultivated universally upon road-sides, embankments of canals, railroads, and levees, to bind them together and prevent their washing away. It is now to be found in the greatest abundance around Natchez and through the hilly land of Adams county. It is also abundant around Vicksburgh, and is considerably spread through several of the river counties of the lower part of the State. Its cultivation ought to be encouraged and extended through every county of this State, as well as all the other Southern States. I do most earnestly recommend every one of your southern readers to take immediate steps to procure a start of this grass, and if they can procure but a single root to begin with, be sure to get that, and they will soon be able to get a stock from which they can in a few years make the most valuable pasture of any other in the south.

Cocoa Grass.—There is another grass that is greatly despised and dreaded here, because, when it takes possession of the land, it can no longer be cultivated in cotton, and not well in anything else. This is the bitter Cocoa. That it is destructive to cultivation I will not dispute; but that the land should be abandoned, as it often is, on account of it, and suffered to go to waste, I shall dispute; because it will take a world of argument and some experience to convince me that a cocoa plantation cannot be made more profitable than a cotton plantation. Throughout all the heat of summer it affords an abundance of most luxuriant pasturage; and throughout the winter it not only affords an inexhaustible supply of food for hogs, but they will actually become fat upon the nut-like roots. In addition to this, it can be plowed up in the fall and sowed with rye or winter oats, making the same ground carry a most abundant coat of rich pasturage throughout the year, excepting the few days required to sow the grain and leave it to germinate. Now is this the curse that it is generally accounted here? or is it not rather a blessing sent to drive this cotton crazy community into a system of husbandry that will produce wool almost as cheap per pound as cotton?

Other Grasses.—In addition to the above grasses, there are two kinds of winter grass that afford pasturage all winter, to say nothing of a kind of parsley, called chickweed, that clothes the fields in one of the richest coats of pasturage several of the winter months; while no one who has contended in the cotton crop with the undying crab grass, as well as nimblewill, &c., &c., will dispute the fact, that even without the aid of the unfailing Bermuda grass, they could find feed for sheep in summer.

Wool in Mississippi.—Now, in this view of facts, is not Mississippi as well situated for a wool growing country as it is for cotton growing; and instead of grumbling at low prices, cursing the cocoa where it has already taken possession of the land, and looking at its onward march with dread; or witnessing the yearly washing away into gullies of field after field; would it not be more rational and advisable to begin in time to prepare for raising another kind of staple than cotton? And now, ye kind-hearted Mississippians, from whom I have received so many welcomes, and derived the information that has enabled and induced me to give you this advice, don't forget that it is given in all good-will by your old friend SOLON ROBINSON, now at Log Hall, Hinds Co., Miss.

March 21, 1845.

P. S. Since writing the above, I have read the article in your March Number upon Bermuda grass. The description given corresponds with the specimens now before me. Dr. Phillips (at whose house I now am) has grass from Natchez and Cuba which are identical. But instead of "spikes four and five," they are three, four and five, and he thinks he has seen six. Dr. Phillips also says that in a conversation which he has just had with Dr. Naylor, of Warren county, he was assured by that gentleman that he has cultivated land upon his place for four years that was well set in Bermuda grass; and, although he does not exterminate it, that it gives him no serious difficulty in cultivation, and he thinks it is far more dreaded than it should be.

NEW ENGLAND EMIGRATION.

THE spirit of emigration so rife in New England, tending as it has, within the last fifteen or twenty years, to concentrate the lands in the hands of a few, is producing a great and deleterious influence on their agricultural interests, and operating against those improvements which are advocated by all enlightened agriculturists of the present day. I have been led to this conclusion in viewing the half-cultivated and neglected land that abounds in almost every part of New England, and it has induced me to make a few suggestions on the subject of emigration, with the hope that some more experienced person may be disposed to examine it, and give his views of its effect on agriculture.

All who are conversant with the habits of the people of New England, have observed their disposition to rove over the face of the globe. So true is this, that no country or island can be visited where a son of New England has not penetrated. The wilds of the west, the deserts of the east, the icy shores of the north, the luxuriant lands of the south, and the savage islands of the ocean, all have representatives from "the land of the pilgrims" dwelling in their midst. It seems to be an inbred principle with them, to tread where civilized man never trod before. Their fathers set the example in leaving their homes in Europe to come to the wilderness of America; and verily the mantle has fallen on the sons.

A large proportion of the young men of New England, who have been trained to agricultural pursuits, are leaving their homes and emigrating to the west in pursuit of a fortune. They look upon the west as an *El Dorado*, where everything is to be gained and nothing can be lost; alas! how many, after struggling for years to find it, are doomed to disappointment. Go into any of our villages and ask, "Where are all your young men?" and the response will be, "Gone to the west; they could not be induced to stay at home and improve our 'worn-out lands,' when the west was open to them as 'a land flowing with milk and honey.'" Westward the tide of emigration makes its way, and what can be done to stay its progress? All classes seem to look upon a home at the west as the greatest earthly possession. A man that can be contented to stay at home and cultivate a farm, with all the natural advantages its location gives him for a market, is thought by many to be weak-minded. It is this infatuation for the west, causing many to sell their farms that they may emigrate, which throws so much land into the possession of comparatively few individuals, not leaving enough engaged in agriculture to cultivate them in a proper manner. They are furthermore crippled by the fact, that in most cases those who purchase them, instead of being able to return to the land a proper share of what is taken from it, must send it to the west to pay for the very land they are not able to improve. The land at the east is impoverished to improve the land at the west.

None can deny that the west holds out great temptations to the farmer who has become disheartened and tired of working the impoverished land of New England, in the cheapness of the land and the fertility of the soil; yet still I doubt whether these inducements overbalance the advantages, all things considered, a farm at the east possesses. Probably two-thirds of those who have emigrated west could have made more money at home, with the same amount of labor and privation they there endure, if money be their object. If education and social privileges are brought into the account, the east possesses every advantage over the west.

If the land be higher and the soil not so rich at the east, the farmer does not require so much of the former, and the latter can be made as fertile as they wish, if they will use the knowledge placed before them. Here the farmer has a ready market for all he can raise, at much higher prices than at the west; and as manufactories increase, the demand is more than the supply. The eastern farmer has an advantage in being able to purchase cheaper all he wishes to buy, in consequence of the saving of transportation. The agricultural products of the west must necessarily seek a distant market, and articles that cannot be produced there must be returned in exchange. The transportation, commissions, &c., thus operate as a bounty in favor of the east—forcing the western farmer to sell cheaper and buy dearer than his eastern neighbor. By reference to the prices of agricultural staples, I find that they are from 25 to 50 per cent. less at the west than at the east, so that though their crops are more abundant, they do not in fact realize as much in proportion for them; and when they add the cost of clearing the land, the difference in price of labor and agricultural implements, the heavy taxes for farm buildings, fences, roads, school-houses, churches, and other improvements that are necessary in all new States, emigrants will find their land has cost them nearly or quite as much as it does in the Eastern States.

The land in New England is not so poor and worn out as many have been led to suppose. It is true, it has been cultivated for a long time, but is that a sufficient reason for its not yielding more abundantly? Old England has been longer under cultivation, yet they find no difficulty in producing the largest crops ever raised in any country, because they cultivate their lands on scientific principles; and when the farmers of New England go and do likewise, they will find their lands bringing forth abundantly. If any doubt it, a trial will convince them that *poor* New England can still produce large crops. (For proof of this assertion, see article on "Improved Farming," vol. 3, p. 248 of the Agriculturist.) The sun shines as genially, and the showers are as abundant as they ever were; large crops *have been* raised; what, then, is in the way of our farmers' success? It wants the sons to stay at home and study theoretical and practical farming, with a determination that they will do their duty; then we should not hear the land evil spoken of, or so many complaints of the necessity of emigrating to make a living. Some of the farmers of Connecticut are now receiving from $400 to $500 an acre by the cultivation of tobacco, and other crops may be made to pay as well.

Another class of the sons of our farmers are not contented to gain their living by the sweat of their brow, but they must play the *gentleman*, or crowd our cities as clerks in stores, or other occupations they consider more *genteel*—there is not enough respectability in the business of a farmer to suit them. They look upon farming as degrading, instead of being, as the beloved Washington designated it, "the most healthful, the most useful, and the most noble employment of man." This ought not so to

be. I trust that a brighter day will dawn upon us, when State and county agricultural societies are formed throughout our land. They are beginning to wake up the farmer to the importance of scientific agricultural knowledge in the cultivation of land. The shows and meetings of the societies tend to diffuse practical information among them, and incite them to study the best methods of using their manures, and what manures they should use on their different soils to produce the best crops, and such other agricultural information as they need, leading them to expect greater results as the reward for their labor from year to year. Much has been accomplished in the few last years by the aid of these societies in raising the standard of agriculture; but there is still a greater work to be performed by the agriculturists of our land, before it will occupy the high position to which it is entitled. Let us see to it, that New England has the honor of being first in *this* as well as other enterprises.

Middletown, Ct. S. C. CHARLES.

SHEEP HUSBANDRY IN KENTUCKY.

I AM highly gratified at the various indications I have observed in the American Agriculturist, of a disposition favorable to an extension of sheep husbandry in the United States. This is a subject in which I have always taken a deep interest, because I believe it will not only greatly promote the agricultural interest, but tend, in an eminent degree, to advance the wealth and prosperity of the whole Union. The difficulty of finding an *adequate* market for our rapidly increasing agricultural products, renders it necessary that we should avail ourselves of as many new sources for the *profitable* employment of *land* and *labor* as possible. Nothing, in our present circumstances, is better calculated for this purpose than sheep husbandry. We have *land* in great abundance, whilst *labor* is comparatively scarce. Sheep husbandry requires much land, and is attended with the advantage of requiring *comparatively* few laborers; and instead of exhausting, tends greatly to fertilize the land thus appropriated. Sheep husbandry may be practised in almost every part of our extensive country, but doubtless some portions of it are better adapted to the business, and it can be carried on more economically, than in others. Without pretending to speak disparagingly of other parts, allow me to set forth the claims of Kentucky as eminently adapted to this highly useful branch of agriculture. To illustrate its fitness for this purpose, suffer me to refer to my own practice in a small way.

For some years after I commenced raising sheep (my cleared land and pastures being then very limited), I *housed them* during the winter months, and fed them with hay, sheaf oats, and occasionally with corn. But when my cleared land and pastures became more extensive, I found that I could winter my sheep to better advantage by suffering them to run on blue grass pastures, kept in reserve for them, hauling out and scattering on the turf corn fodder, when the grass became too short, or was covered with snow. This mode of feeding required less labor, and was less expensive, than housing them; and experience soon taught me that my sheep passed through the winter in better condition than when housed, and fed on hay and grain.

I have now about 300 acres of cleared land; nearly one half of which is in meadow, clover and blue grass—*poa pratensis;* and the other half reserved for cultivation in corn, wheat, hemp, &c.; and 150 acres in wood land, the greater part well cleared up and sown in blue grass. I have been taught by experience, recently, that sheep will do remarkably well on the rankest clover, which will enable me in future to keep more of my blue grass pastures in reserve for winter feeding. During the last fall (the season being favorable), my clover fields furnished my flock, of somewhat less than 400, sufficient pasturage till the month of January; and they have been since kept on my blue grass pastures, without the necessity of feeding, except some four or five days when the ground was covered with snow; and there is still grass enough to carry them through the residue of the winter.

The low price of hemp, and agricultural products generally, has induced me to sow down much of my cleared land in clover, which will enable me to keep double the number of sheep I now have, without interfering with my farming operations; and when I get the whole of my woodland cleared up and set in blue grass, I expect to extend my flock to 1000 sheep. Thus you see we are neither under the necessity of incurring the expense of *erecting buildings* to shelter our sheep, nor of raising *grain or hay* for their food; nor even to employ laborers to feed them, except during the short time it may become necessary to haul out fodder for them, when the ground is covered with snow. And in a single day enough may be hauled out on sleds to last them a week or more.

It is argued by some that our rich lands are too valuable to be appropriated advantageously to sheep husbandry. There would be much force in this objection if they were entirely appropriated to that purpose. But not so when sheep husbandry is combined with large hemp and corn crops. Hemp has hitherto been a profitable crop, though now it is too low to justify its extensive culture; and large corn crops are necessary with a view of raising horses, mules, cattle, and hogs. There is no system of husbandry so well calculated to prepare our lands for large products of corn and hemp, as feeding sheep on our clover lands. I had supposed, till I made the experiment, that sheep would not do well on rank clover (*a*). To satisfy myself on this point, I put about 150 wethers on a clover field, when in flower, early in May. The clover was at the time nearly as high as the sheep's backs (Merinos). I kept them on this during the whole summer, and in the fall they were fat enough for the butcher. It is true they trod down much of the clover; but, as I had an abundance of pasture, this was an advantage, as it left a thick mat of grass on the ground, intermingled with the droppings of the sheep, distributed with much regularity. This thick covering prevented a loss of manure by washing rains, and rapidly brought on a second growth of clover, which furnished my whole flock with an abundance of pasture till the early part of January. The season was, however, unusually favorable, and hence the clover pastures lasted two or three weeks later than usual. In future I intend to keep my sheep entirely on my clover fields from the time they are in flower, and thus I shall be able to keep in reserve a greater supply of blue grass for winter feeding.

But it is not upon our high priced rich lands alone

that we can carry on sheep husbandry to advantage. Kentucky has a belt of hill and mountain country, bordering on the Virginia line, on the east, and on the rich lands of the State on the west, averaging about 75 miles in width, extending from the Ohio river and Big Sandy, latitude 38° 40', to the Tennessee line, 36° 30' north. The whole of this region is admirably adapted to sheep husbandry. The most northern part but a few minutes north of my residence, and extending about two degrees farther south. The lands are very cheap, the State price of those not yet appropriated only five cents per acre, and those purchased second-handed, more or less improved, may be had from 25 to 50 cents per acre, and still less when unimproved. This country, in a state of nature, furnishes, during the spring, summer, and fall months, a fine range for sheep, and is susceptible of great improvement by clearing up and sowing the cultivated grasses for winter feeding. This whole country is finely adapted to the Spanish mode of sheep husbandry. Very large flocks might be driven to the mountain region, some thirty to sixty miles from the rich lands, immediately after shearing time, grazed till late in the fall, and then brought back to be sustained, during the winter, on the luxuriant blue grass pastures of the rich lands of the interior.

A very intelligent friend, residing in the southern part of the above district of country, speaks of it in the following terms: "One of the strongest proofs of this region of country being favorable to the growing of sheep stock is, that we are situated in the same degree of north latitude with the sheep-raising parts of Spain—Leon, Estremadura, Old Castile, &c.—only that our mountains are more richly and abundantly clad with luxuriant wild grasses and fern, pea vine and shrubbery, than the mountain regions of Spain, where they raise such abundant stocks of sheep. Wayne county, with a few adjoining counties, affords more fine water power than any country of the same extent that I have ever known; and for health and fine pure drinking water, no country excels it on the face of the globe. Now is the time to commence the business of sheep husbandry, whilst land can be got almost for nothing. It is worthy of remark that our sheep, which are suffered to roam and graze in the mountains altogether, produce about ONE FOURTH *more wool at a shearing than the sheep that are raised and grazed altogether on our farms, and of a* MUCH BETTER QUALITY!" In another part of his letter he says, "the tops of the mountains of Spain are sterile, without verdure, producing no food for sheep or other animals to graze on; our mountains are quite different; they are thickly clad from bottom to top, and all over the top, with fine rich wild grasses and shrubbery of every variety for stock to graze on. In the midst of our mountains are to be found a great abundance of salt water, and stone coal of the finest quality, together with a great variety of mineral waters and pure springs."

Another friend, residing in Knox county, writes to me, "My sheep upon my farm, adjoining Barboursville, do not thrive, even with pasture and winter food, like the sheep in the extremities of the county, which have neither pastures nor winter food, *except what they get in the woods.* Without cultivated grasses of any description, sheep will live and do well *all the winter, subsisting on the spontaneous growth of the country.*"

Another friend, residing in the northern portion of the above described mountain region, writes that "the counties of Carter and Lawrence, and the eastern portion of the State, are admirably adapted to sheep husbandry. There are several flocks of sheep in this neighborhood that thrive and increase wonderfully, *running at large,* at little cost or trouble to the owners. Many flocks have no other reliance, during the winter, *but what they get in the woods.* The great advantages of this country for sheep husbandry is, the cheapness of the land, its adaptation to grasses, grain, and roots, its healthfulness—sheep delight in mountain or hilly land—the natural evergreens and shrubbery upon which sheep can feed and subsist in winter, though it is not safe to rely altogether upon these."

I could give many other extracts from letters addressed to me by highly intelligent gentlemen, residing in the mountain districts above described, to show its admirable adaptation to sheep husbandry; but I refrain from doing so for fear of running this communication to too great a length.

There is also a strip of low priced land bordering on the Ohio river, in the counties of Bracken, Pendleton, Campbell, Kenton, and from thence to Louisville, finely adapted to sheep husbandry; but I have not space to go into a description of it.

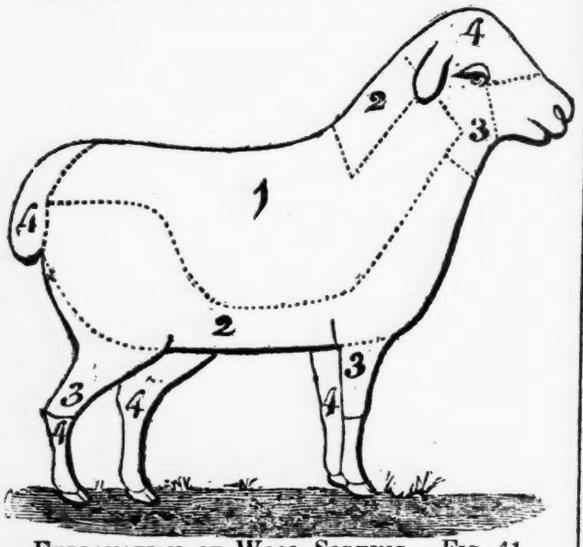
A few remarks as to the probable future market for wool will conclude my letter, already, I fear, too long. The returns of the late census show that the number of sheep in the United States in 1840 was a fraction less than 20,000,000. Twice this number would probably not furnish more wool than would be needed by a population of 17,000,000, if we were to manufacture all our own blankets, carpets, and every other description of woollen fabrics. The period is not very distant when this will be done, with the exception of some very fine goods. We shall then need about 100,000,000 pounds of wool for a population of 17,000,000, and in that proportion for home consumption, even supposing none should be exported. Now as our population increases, as past experience demonstrates, at a compound ratio of three per cent. per annum, we shall have a population of 34,000,000 in the year 1864; 51,000,000 in 1878; and 60,000,000 in 1888.* We shall need at these respective periods, two, three, and four hundred millions of pounds of wool. If we estimate sheep, upon an average, to produce 2½ lbs. of wool per head, we shall require in the year 1888, a little more than forty years hence, 160,000,000 of sheep. This view of the subject, without looking to a foreign market, holds out a strong inducement to engage in sheep husbandry.

A. BEATTY.

(*a*) Feeding sheep on clover, especially when fatting them, is quite a common practice in Europe, and in the northern States of America. They do extremely well upon it, and if accustomed to it gradually, there is no fear of hoven, the only thing to dread from rank clover pasture. By good feeding sheep may be pushed forward in their growth and breeding one year; they will, moreover, be larger and finer in the carcase, and produce a greater weight of wool and that of a superior quality.

* See a table of population, by an annual increment of 3 per cent., Niles' National Register, January 11th, 1845, p. 300.

SHEEP HUSBANDRY IN SPAIN.—No. 5.



Explanation of Wool Sorting. Fig. 41.

1. *Refina*, or 1st quality.
2. *Fina*, or 2d do.
3. *Tercera*, or 3d do.
4. *Cayda*, or refuse.

The sheep and shearers being dispatched, the first thing to be done is, to weigh and pack up the fleeces, and convey them entire to a place to be scoured, if they are to go out of the kingdom, or to any considerable distance within it; for, as the wool is said never to lose less than half of its weight in the operation of scouring, and often more when the sweating has been violent, at least one half of the expense of transportation is saved. As soon as the wool reaches the scouring places, it is given to the "Apartadores," whose business it is to separate it into three parcels of different qualities, as denoted by the above diagram. That taken from the back, flanks, and sides of the neck of the sheep is regarded as of the 1*st quality;* that from the breast, belly, sides of the haunches, and from the back part of the neck, the 2*d quality;* that from the cheeks and throat, the fore legs above the knees, the hams, and back part of the haunches, the 3*d quality;* and that which is taken from the rump, the extremities, and from between the legs is of the 4*th quality*, and is comparatively worthless. Formerly, the 2d quality was taken only from the haunches and belly; the 3d quality, from the back part of the neck, the cheeks, throat, breast, fore legs and hams; and the 4th quality, from the top of the head, the tail, and the extremities of the hind legs. Hence, a different value is fixed upon each of these classes of wool, although it has long been a custom in some provinces to sell the whole pile together at a mean price.

As soon as the wool is properly assorted, it is spread upon wooden hurdles and beaten with rods, in order to deprive it of as much of the dirt and dust adhering to it as possible, previous to its being scoured. In selecting a situation for a scouring place, a valley open to the sun is preferred, through which runs a stream of pure water, and where there are inclined meadows sufficiently spacious for drying the wool. The fixtures and apparatus for scouring consist of one or more large copper caldrons, mounted on a furnace, and provided with appropriate cocks, pipes, gutters, &c., for conducting hot water into three square pits or wells (one for each class of wool), lined with masonry, and are about a yard in depth. These wells are filled to half of their depth or more with wool, upon which there is let fall from the caldrons a current of water heated to a temperature of 120° to 140° F., and even higher, according to the degree of fineness and the condition of the article to be scoured. The finer the quality and the more dirty the wool, the higher it becomes necessary to carry the temperature. The wool, thus disposed, is turned in the hot water in every direction with a large fork or some other implement, for a space of five or six minutes, and is then spread on wooden hurdles, a yard or more in width, situated alongside the pits, in order to drain off the water and filth which has already begun to dissolve. Directly by the side of these hurdles is a narrow aqueduct formed of masonry or stone, through which flows a current of cold water, into which the wool is next thrown. It is received at the head of the aqueduct, and is carried along its length by the force of the current, being pressed and rubbed in its passage by the feet of one set of men, until it is at last thrown out by another, upon an inclined plane formed also of masonry or of stone, where it is left to drain. At the lower end of the aqueduct is placed a small net for catching such locks as may accidentally escape the washers above, and thereby prevent them from being carried away. As soon as the wool is well drained, it is spread upon the grass in the neighboring meadows, and in the course of four or five hot sunny days, it becomes sufficiently dry to be packed up and sent away to the manufactories or to the places of shipment. It is usually put up in canvass bags, of various sizes, on each of which are marked an initial letter indicating its quality, and other letters or signs denoting the flock and sub-division it is from; so that the experienced wool-stapler is enabled to distinguish, at sight, the nature of each bale and the cavaña to which it belonged.

Imperfect as this mode of scouring appears, it answers every purpose for preserving the wool during the longest voyage; and if a similar mode were adopted in the United States, particularly with the fine-woolled races, or those, the fleeces of which are intended for felts, instead of washing it on their backs, as is generally the case, it would doubtless be much improved. It is a well established fact, that if wool remains in the yolk for a period of six months or a year, and then be scoured, it will yield a greater weight of clean wool than if washed when newly shorn; but in the process of fulling, the articles made from it become more loose and less uniform in their texture, are weaker, less durable, and consequently less valuable to the consumer. And here it is to be regretted that the interests of the wool-grower, of the manufacturer, and of the consumer, are not looked upon as the same.

The fibre of wool is known to consist of small capillary tubes filled with one kind of oil, regarded as the *marrow*, and is surrounded by another oil, or rather soap, commonly called the *yolk*. The latter, by weight, with other impurities, constitutes from 50 to 75 per cent. of the wool, and in some cases even more, according to its quality. The finer the wool, the more abundant is the yolk. The solid part of the fibre is soluble neither in cold nor in hot water, unless heated to a certain point. From 22 to 29 per cent.,

by weight, of the yolk, will readily dissolve in pure water of a temperature of 120° to 140° F., but not in a cold bath, even if it were to remain for three or four days; and in the ordinary process of scouring, in Spain, there is left of this substance, in the wool, from 4 to 7 per cent. That portion of the yolk which will dissolve in cold water, if suffered to remain on the fibre for a long time, causes it to "swell up," according to Vauquelin, "split, and lose its strength;" whereas, if it be removed by soaking the wool in cold water for 24 hours, and then subjecting it to a clear running stream, as practised in Spain, the part remaining will become indurated in time, converting itself, as it were, into new wool, and will tend to preserve rather than injure the fibre from the attacks of insects and from decay.

A contrariety of opinion appears to prevail with regard to the best mode of washing or scouring wool. One class of persons advocate washing it on the backs of the sheep; another, in hot water; and a third class in a cold bath, after it is shorn. The first mode is regarded by Messrs. Perrault de Jotemps and Girod, of the department of Ain, in France, as being often dangerous to the health of the sheep, and scouring it in hot water, as inexpedient, and at the same time injurious to its quality. The mode that they prefer is, to allow the wool, as soon as shorn, to soak in pure cold water for a greater or less length of time, according to its degree of impurity, which, ordinarily, will not exceed 24 hours; and then to subject it to a cool running stream, in a similar manner as practised in Spain. Experience has taught them that, by this mode of scouring, the wool is of a better quality, and suffers much less by waste than by the hot water process; and besides, as it contains a determinate quantity of yolk, or indurated oil, it enables both the buyer and the seller to judge more accurately of its value, and ultimately requires from the manufacturer much less labor. The experience of others, however, in preparing wool for felts and the thicker kinds of cloth, would seem to justify the mode of scouring in Spain. D'Jay Browne.

New York, 7th April, 1845.

Agriculture in Scotland.—No. 7.

Since the date of my last letter I have made several short excursions in the neighborhood of Edinburgh, tempted by the spring-like days which already, in this mild climate, begin to visit us. The ground is perfectly soft and free from frost; the grain crops look bright and flourishing, and some of the irrigated meadows are quite luxuriant in the greenness and freshness of their herbage. A great part of the plowing is accomplished, and early this month potato planting will commence.

Farm of Mr. Girdwood.—A few days since, I walked out to Corstorphine, about four miles, to visit the farm of Mr. Girdwood. The whole village of Corstorphine, a compact, pretty little place, is included within his boundaries. From the upland fields, which stretch nearly to the top of Corstorphine Hill, is a most lovely view, embracing, on the one side, Edinburgh, with the castle in the centre and Arthur's Seat in the background, and the Firth of Forth, dotted with sails, and bounded to the north by the dark coast of Fife; while on the other spread the rich fields of the West Lothians for many miles, the view being only limited to the south and west, by the Pentlands and the high hills of Lanark.

Mr. Girdwood, with much kindness, passed the whole day in rambling with me over his fields. The farm buildings first attracted my notice; they are far too small for the size of the farm, and are not convenient in their arrangement. Another year, however, will probably see the whole removed, and new ones erected on a more commodious site, furnished with every convenience. The stack yard still presents a large array of stacks, comprising wheat, barley, oats and beans. In the autumn there were about 160, as I understand. The oats and wheat were this year cut while quite green, so much so, that some of the neighboring farmers did not hesitate to say that John Girdwood was "*clean gane daft.*" Tne result, however, has silenced them; for his grain is heavier and better than theirs, while the straw is much more valuable as fodder. The barn yards are always in winter well filled with fattening animals. These are of various breeds, but chiefly West Highlanders and Angus or Polled. They are bought at fairs, sold off to the Edinburgh butchers as soon as they come into condition, and their places immediately refilled.

That part of the farm which may be called upland has only been taken by Mr. Girdwood within a few years. The outgoing tenants considered it absolutely impossible to raise good turnips there, and thought any attempt at improvement quite chimerical. They were overrun with weeds. The rains in winter ran in torrents down the furrows, washing away the manure and conveying accumulations of sand to the lower end of each field. Mr. Girdwood commenced operations by putting a drain 30 inches deep into every furrow, being 18 feet apart; he then dug up all the weeds in the open fields, and cleaned away those that occupied a space of several feet on each side of the hedges. Deep plowing and liberal manuring completed the change. The turnip crop on one of these fields was, two years since, as high as 40 tons to the acre, and the crop of the present year, a portion of which I saw, is very fine. No water now stands in the furrows, and it is easy to see that during the whole winter none has run over the surface; it all goes to the drains. This is an instance of the admirable effect of efficient drainage, preparing the way for deep plowing, and all the modes of modern manuring which prove so efficient on well *dried* land.

Mr. Girdwood assured me that since he, still a young man, began to attend Edinburgh market, the number of quarters of grain weekly sold there has doubled. It being a market where all the grain sold is from the neighborhood, and actually brought in sacks to the place of sale, this increase shows the effect of the improved modern systems in the increase of crops upon the same land; for near the city not much land has been reclaimed. I think that not a single intelligent farmer would deny that draining was the first step towards this great improvement. While the quantity has increased the quality has improved in an equal proportion. As to barley, for instance, I am assured that, a few years since, but about five samples in a hundred were fit for malting. Now, the buyer may almost go into the market blindfold, for not more than five out of a hundred are *unfit* for malting.

The lower part of Mr. Girdwood's farm is nearly level, and has a rich alluvial soil. His course of rotation for the whole farm is one of six years, being one year of grass and the other five of potatoes, barley, turnips, wheat, and oats. Manure is added both with the potatoes and turnips, or once in three years, so that with the year of grass, this may be considered a liberal rotation. He does not, however, tie himself strictly to it, but varies when circumstances seem to require it.

Immense quantities of potatoes are raised on the farms near Edinburgh. On this, I saw one heap which contained about 4,800 bushels, and yet it was only about a third of the entire crop. They are generally placed in a long shallow pit, about 8 feet wide, heaped up as high as possible, and then covered with straw and earth, the latter thrown lightly on to the thickness of about 8 inches. Wisps of straw are placed on the top as ventilators, and drains run on each side, and the whole rises about 6 feet above the surface.

Mr. Girdwood, in common with all of the best Scottish farmers, feels the necessity of scientific knowledge, and in his zeal for obtaining it, has been attending courses of practical chemistry. The information already thus acquired must be of very great advantage in his daily pursuits, and his spirited example in this respect can scarcely be too highly commended.

JOHN P. NORTON.

Edinburgh, March 1, 1845.

VALUE OF AGRICULTURAL JOURNALS.

ANY improvement made in the agricultural department of business is truly matter for congratulation, since more are dependant upon agriculture for subsistence than any other branch of business whatever. That man, then, who is instrumental in improving the system, or in any way giving an impulse to its interests, is in truth a benefactor to mankind. At present *it* is evident there are errors in the farming system. Since my acquaintance with the American Agriculturist, I have not only read its columns with delight, but with an unusual degree of interest, and am led to conclude, it is an instrument well calculated to strike an effectual blow at the root of some (at least) of the errors now existing in the general system of farming.

Like a philanthropist, you are making efforts to correct errors that have long existed, and though your labor may appear like "casting your bread on the waters," I am confident you will find it again, even if not until "after many days." You have reason to take courage, for already your efforts have been crowned with a degree of success.

In some sections of our country, where a few years since agricultural papers were strangers, and where the people were far from being "careful to entertain" them, your paper has found friends and is hospitably received, even in old Connecticut. Though some have hesitated to have their names enrolled on your subscription list, in consequence of having been disappointed in the merits of a periodical of a similar character published for three or four years in this State; yet I take pleasure in having it in my power to say, these difficulties have in many places in this State been overcome, and the reading of your work has removed objections that might have been considered insuperable. I have recently learned with pleasure that you have quite a respectable list of subscribers here. This is an indication that all interest in agricultural improvement has not subsided in our State. I am truly glad to find there is an interest in this thing, and I trust there is a waking up to the subject of agricultural reading. As a proof, permit me to state one fact.

I learn that an acquaintance of mine, a respectable farmer, on being solicited to patronize the Agriculturist, declined on the consideration that he then was, and for two years had been, a subscriber to an agricultural paper, and had not been profited by it at all. However, on learning that the Agriculturist was edited by a *practical farmer*—one who understands the business in all its departments, and who is thoroughly acquainted with stock breeding, &c., he requested his subscription to be forwarded, commencing with Vol. IV., remarking at the same time, "Such a work is entitled to my patronage, and the patronage of all who desire to see agriculture improve." After reading Nos. 1 and 2, he manifested in high terms his approval, inquiring where he should leave his subscription for Vol. V.

This gentleman is a thorough farmer, and possesses an extensive influence. I am sensible that you are not in want of commendatory paragraphs, yet I presume you will excuse me for this *one*, as it is *only* one out of many that I might give.

The practical matter with which your paper abounds has a tendency to open the minds of its readers to a sense of, not only the possibility, but also the propriety of improvement in this most important branch of business. The farmer is unwilling to admit that agriculture is susceptible of less improvement than the mechanical arts, while at the same time it is far behind in this country. They ask what's to be done? Why, up and at it with the same untiring industry that the mechanist has displayed.

Connecticut, March 5, 1845. B. C. D.

IMPERIAL OATS.—I am pleased to see that you offer this valuable grain for sale. I commenced raising them four years ago, with half a bushel of seed. They are now my principal oat crop. Their weight is 40 to 45 pounds per bushel. They yield as many bushels per acre as the common oat, but should be cut when the straw turns yellow near the root, for if left till the head turns entirely so, they are apt to shell, the chaff being light and weak, while the grain is heavy. I am satisfied they are the best oats I can raise for stock feeding and general farm use, as I produce none for sale. From my own experience I can freely recommend them for general cultivation.

Black Rock, N. Y. L. F. A.

We sold every barrel sent us of these oats early in March, not being able to supply more than half the demand.

CONNECTICUT OXEN.—Having received two orders the past month for Connecticut working oxen, we wrote to Mr. Wm. K. Townsend, of New Haven, requesting him to execute them. This he has done with great satisfaction to the parties concerned; selecting one pair from Old Guilford, and the other from North Middletown. They are finely formed and of medium size, yet possess great muscular power, and have such a quick step, that either pair will plow an acre and a half per day with ease.

FARM AND VILLA OF MR. COLT.

This farm is situated in Paterson, New Jersey, 16 miles west of New York, and just an hour's ride by railroad. It comprises 560 acres, of which 430 adjoin and are half encircled by the village—making some part of it town lots—and 130 lie on the towering hill, about a quarter of a mile beyond. This last has been devoted principally to pasture, and we shall speak of it hereafter. The soil of the lower division of the farm is a sandy or gravelly loam, and naturally thin—some parts indeed are very poor. This, however, only stimulated the genius of Mr. Colt the more to study to improve it, which he has done to a very high degree; and now, in many instances, the crops quadruple and quintuple the former produce of the land.

In bringing this up to its present state of fertility, Mr. C. has been at no extravagant outlay on the farm proper, but has merely set an example that any intelligent and industrious man desirous of improvement may follow. Of course he has carefully husbanded all the barn-yard manures; in addition to this, he has availed himself of the peat and swamp mud in the vicinity; but one of his chief resources, after all, has been the night soil of the town of Paterson, and the waste from the woollen, cotton, hemp, flax, paper, leather, and comb factories of the town—offal from the slaughter-houses, and indeed all vegetable and dead animal matter which could be found within a convenient distance of the farm. All these are eminently fertilizing substances, and yet in many places they are left to accumulate in filthy heaps, scenting the air with their noisome exhalations—a disgusting nuisance to their neighborhood, and frequently highly detrimental to the health of the inhabitants. But here Mr. C. directs these waste materials to be seized upon, mixes them with swamp mud or peat, adds a little charcoal dust, plaster of Paris, ashes, lime, salt, or some other foreign substance, and thus forms a rich inodorous compost, which has a most astonishing effect upon vegetation. Of the exact manner of making these composts we shall give recipes hereafter, for the benefit of all farmers who may be so situated as to be able to procure the materials to form them.

Rotation of Crops.—These are such as are usually followed by good Jersey farmers, and are so well known as to need no particularizing.

Stock.—This is various and choice in its kind. The Devons were obtained from the herds of Mr. L. F. Allen, of Black Rock, and Mr. Stanley, of Baltimore. They are very handsome, especially those procured of Mr. A., and just the thing for such light land. The Alderneys are from the importation of the late Mr. Nicholas Biddle, of Pennsylvania. They cost a high price in England—about $300 each—and are the only pure animals of this breed of cattle we know in this vicinity. We have seen plenty which are *called* Alderney; but we have met with none before of undoubted pedigree. They are small in size, and in appearance rather ugly than otherwise. Their color is yellow inclining to dun, with white patches. The nose and rim round the eye is of a dark ash or brown; the horns short, fine, and turned up; the eyes large and brilliant. They are celebrated for the extreme richness of their milk—the quantity is small, rarely exceeding eight to ten quarts per day. As a curiosity they are worthy of propagation, and we are glad to learn that Mr. Colt means to keep them pure; he seems to have no great faith in this immaculate crossing for *improvement*, which seizes like a mania upon so many of our countrymen, and for which, as a general rule, we entertain the most supreme contempt. The Durham cows are few, and kept for the large quantity and good quality of milk they give. The pigs are mostly Berkshire. We also observed a pure Cochin China sow. Its color is black, with grey legs, and patches on the belly. The animal is of small size, with a bear's head and hollow back—the belly like a blown up bladder, and almost touching the ground. The other part of the stock is working cattle and horses for farm use. The soiling system of feeding is here adopted, and has been found far preferable to that of pasturing.

Farm Buildings.—These are plain and convenient, and were erected at a moderate cost. The barn and sheds surround the yards, thus rendering them much more comfortable for stock. The piggery and hen house are well contrived, and superior of their kind. The urine from these buildings, the wash of the kitchen, and any other fertilizing substance which can be, is conducted into the well littered barn-yard, and helps to form and enrich its compost heaps.

Villa.—Mr. Colt reserved 70 acres adjoining the farm for his own residence and particular management. This he is fast transforming into one of the most charming places imaginable. In 1839 the enclosure was a barren sand hill, with an alder swamp of twelve acres at the foot, and the residue of the land of the poorest quality. The top of the hill was first levelled somewhat, and here was erected the family mansion.

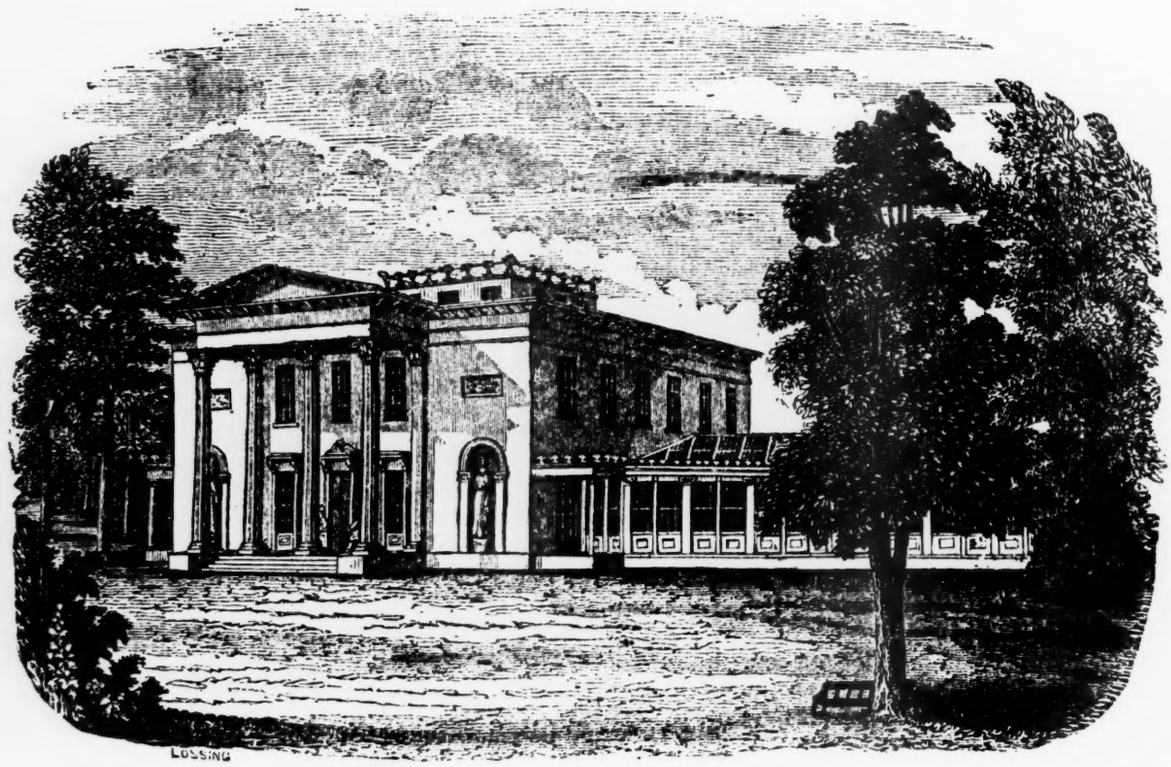
The sides were then handsomely terraced and planted with a great variety of forest and fruit trees, flowering shrubs and grape vines. Among these wind the carriage road and footpaths from the gateways to the house. South and west of this, and on the apex of the hill, spreads out a beautiful lawn, with a little pond of the clearest water in the centre; while below, on a level with the street, plays a fountain with a single *jet d'eau*. This pond supplies the mansion with water of the softest and purest kind, from the garret down to the cellar kitchen; and can be used also, any time it is needed, to irrigate the lawn and terraces. In this way the grass and surrounding vegetation are kept green and growing in the hottest and driest weather.

The swamp was next drained, and its surface proved a rich bed of muck several feet deep. This was dug out and spread upon the neighboring upland to enrich it. A clear rivulet was then let in, and thus was an unhealthy swamp turned into two pretty lakes, separated by a fall of nine feet. Here Mr. C. has placed a water wheel, which gives sufficient power to force the water to the very top of the mansion and into the little pond before spoken of in the centre of the lawn on the hill. A rustic lodge is erected over the water-works to protect them from all weather, and this is encircled by a copse of wood; so that, till closely approached, the two lakes are supposed to be one. They are well stocked with fish, and have boats in them for water excursions, for those disposed for a short row or sail. A great variety of water fowl may be seen sporting in the lakes and around, among which we noticed wild geese, the beautiful wood-duck, and a pair of magnificent swans from the royal gardens of Fontainbleau, in

France, presented by the Duke of Polignac to General D'Evereux, and placed here with his friend, Mr. Colt. The lakes are dotted with little islands and promontories for the accommodation of the water fowl. Here flourish the magnolia glauca and flowering shrubs. North and east of the lakes is a wide cranberry patch, and the fruit and vegetable gardens, which are ample and well stocked. The remainder of the enclosure is a park planted with every variety of foreign and native fruit and forest trees, which could be conveniently obtained, and that will grow in this climate. The whole is to be enclosed with a handsome stone wall, eight feet high, a small part of the line of which is already laid. Around this, within, is planted a thick belt of trees; so that, when grown, the wall will be hid from sight. At the northeast side is a gateway and rustic lodge; at the southwest another gateway, with a castellated gothic lodge.

On the border of the gardens, near the lower lake, stands a handsome cottage for the gardener, and attached to it is a grapery 80 feet by 20. West of the lower lake is a beautiful cottage. This is the summer retreat of General D'Evereux, who so generously raised an Irish legion of 5,000 men in 1819, transported them to South America, and under the patriot Bolivar, gallantly assisted to achieve the independence of the provinces of Columbia and Venezuela. No cross fence is allowed to mar the view within the enclosure. The trees and shrubbery are planted single, and in clumps or rows, as most desirable to beautify and relieve the ground.

Roswell House. Fig. 42.



Seat of Roswell L. Colt, Esq., Paterson, N. J.

Mansion.—This is erected on the hill rising 65 feet above the town. It is 68 feet 8 inches square, two stories high, and is built of handsome brown freestone, nearly resembling the celebrated Portland stone of England. It is taken from the Paterson quarries, in the immediate neighborhood, and is the same as that used in building the new Trinity Church of this city. Facing the south, and attached to the house, is a conservatory, with a double span roof, 60 feet long, 37 wide, and 12 high. Adjoining this, at the end, is a hot-house 27 feet long, 37 wide, and 30 high. These are well filled with a choice collection of plants, and are kept in excellent order. A little aviary of rare birds stands at the left, as the conservatory is entered from the centre drawing-room, and a few statues grace the walks around.

The architecture of the house is very handsome, as will be seen from the sketch above. It has a portico in front, supported by pillars of the Corinthian order, and a piazza on three sides. The roof is four square, with a double pitch, and eaves jutting three feet over the walls in the Italian style. This preserves the walls from dampness even if not furrowed out. The interior is highly commodious and beautifully finished. We subjoin a plan of the first story, Fig. 43.

Explanation.—a. Portico, as seen in front, Fig. 42. On each side of this are niches in the walls for statues. Within the portico, at the right and left of the front door, stand the two famous statues of Tam O'Shanter and Souter Johnny, by the celebrated Scotch artist, Thom. They are admirably done, and Mr. Colt tells some amusing anecdotes of their being occasionally taken in the evening for living personages, by transient visitants.

b, b, b. Piazza on the east, west, and north sides.

c, c, c. East rooms or parlors, 25 feet by 20, with folding doors opening into each other, thus forming

a complete suite of rooms. They also open into the conservatory by raising the windows, which extend from the ceiling to the floor.

d. Vestibule, 10 feet square.

e. Hall, 10 feet by 56.

f. Stairway.

g. Private stairway.

h. Dressing-room to bed-room *k.*

i. Bed-room

j. Dining-room, 25 by 20, corresponding with the centre parlor. The chimney to this is unique, being a hollow Ionic pillar of Scagliola marble, through which a pipe is placed to carry off the smoke.

k. Bed-room.

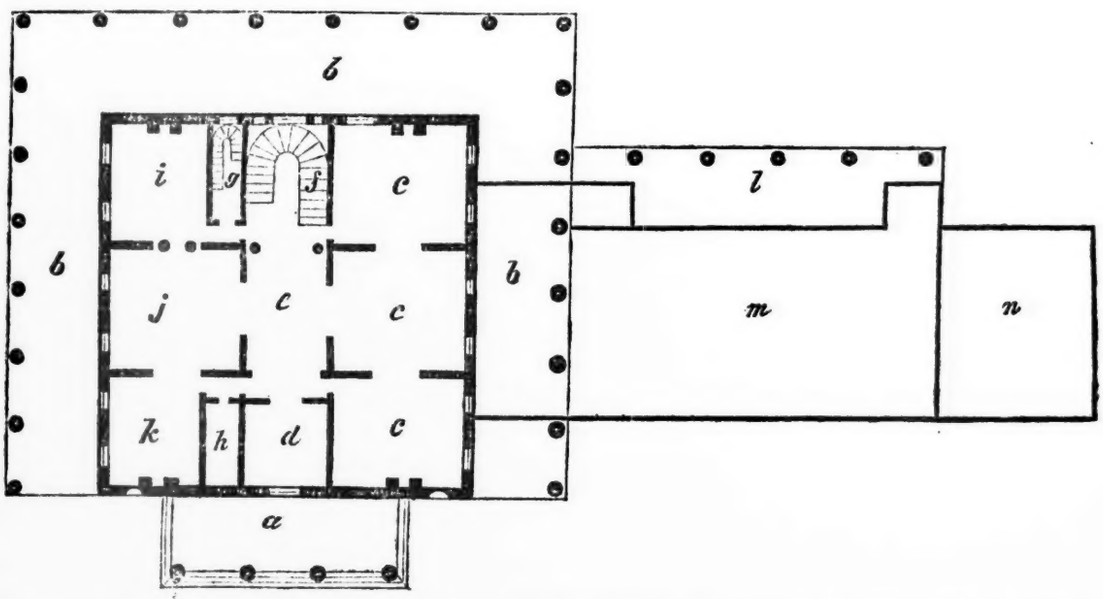
l. Portico to conservaory.

m. Conservatory.—*n.* Hothouse.

From the above simple description, we think the reader will now have a pretty good idea of the charming place that the taste and persevering industry of Mr. Colt has formed at Roswell House. With its buildings and terraces, park, lake, and gardens, it will indeed be a most enchanting spot when completed, and well worthy the visit of those who take pleasure in viewing such things, or who would study to improve themselves in architecture and landscape gardening.

Fruit Trees and Grapes.—It was not with the intention of making an ostentatious display that Mr. Colt has done what we have described; but in all things he has endeavored to combine utility with beauty. There are about 1,000 forest trees already set out here in the park, and at least 1,200 pears

GROUND PLAN OF ROSWELL HOUSE. FIG. 43.



apples, peaches, cherries, plums, and the smaller fruit, aside from a nursery stocked with everything choice and of great variety, chosen from abroad as well as at home. These will be fully tested in this climate, and the result made public for the benefit of all, and then a generous distribution of such as are worthy of propagation. For the same purpose, also, he has planted a part of the terraces with about 1,000 vines, after the French method. Most of these are foreign varieties, and it is intended to acclimate them if possible. We are sure that our readers will join with us in saying that all this is deserving commendation; for if Mr. C. were disposed to sell his fruit, &c., he would ultimately get a handsome income from his pleasure grounds.

When we visited Paterson the grapes were in season. They had ripened well and proved delicious fruit. We found them generally free from mildew. Since this, Mr. C. has prepared two acres more for grapes, by trenching the ground three feet deep and three feet wide, leaving one foot untrenched, so that the rows of vines will stand four feet apart. These trenches he has manured with bones, old shoes, rags, the refuse of the factories, and street dirt. The plantings are principally Miller's Burgundy, black Hamburg, chasselas, and sweet water. The trellis is made of half inch iron-rod posts, stuck two feet in the ground, and rising four feet out. Holes are punched in these one foot apart, and iron wires run through from post to post. All these are coated with gas tar, and will thus last a long time. It makes a light, cheap trellis; at the same time, it is sufficiently strong for all purposes.

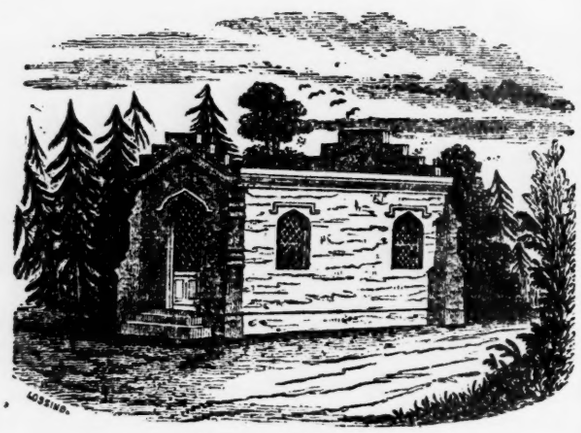
Hedges.—One of these runs along the roadside, formed of the Maclura or Osage Orange. Thus far this beautiful native shrub has escaped the attack of insects. It grows thriftily, and its verdure is of the deepest and thickest kind. We have met this shrub in other parts of the United States, and can highly recommend it for hedges.

Mushroom House.—This is a rare addition to the conservatory in the United States. That at Mr. Colt's is 50 feet long, and has four tiers of beds five feet wide, and running the whole length. These are planted with seed brought from France, and bear very abundantly nine to ten months out of the year. The mushrooms are delicious eating, and usually sell in market for 37 cents per quart. They will come into bearing one month after planting the seeds.

Prairie Grouse.—Mr. C. has a few pairs of this highly prized game bird recently sent him from New Orleans by his son. He will endeavor to domesticate them, and if he succeeds they will prove a rich addition to the poultry yard.

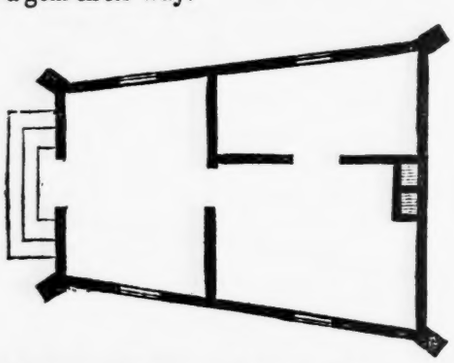
White Guinea Hens.—Among the poultry we noticed these rare birds. We should be glad to know if any of our readers possess white peacocks, as we are desirous of obtaining a pair.

Removing a Large Tree.—On the lawn in front of the house stands a large horse-chestnut. It was planted by Mr. Colt in 1795, and transplanted some distance to the spot where it now stands, in 1840. It is growing finely, and in looking at it one would judge it had always stood in its present position. It is one of the most successful specimens of transplanting a large tree which has fallen under our observation.



LODGE. FIG. 44.

The above lodge is at the gateway of the west entrance to the pleasure grounds. It is of pure gothic architecture, of the time of Elizabeth. It was designed by General D'Evereux, and we must confess that we think it no less pretty than appropriate, and quite a gem in its way.



GROUND PLAN OF LODGE. FIG. 45.

The rooms we need not particularize; they are such as are suitable for those of a small family.

Hill Farm.—South of Paterson, and within a stone's throw of the village, rises a range of hills 600 to 700 feet above the level below. Large quarries of the finest kind of brown free-stone are found here. On the top of this hill spreads out a broad rolling plain, and here Mr. Colt has another tract of land of about 130 acres. It abounds in sweet-scented grasses, and would make one of the best of sheep walks. The surface is rather rocky, but occasional rich loamy veins are found, sufficient to grow roots and other things for sheep. A large flock might be pastured here in the summer, and then be taken to fat or winter on the farm below. Delicious mutton could thus be made from Southdowns and their crosses.

The view from the hill is of considerable extent and exceedingly picturesque; embracing the winding course of the clear, sparkling waters of the Passaic; the town of Paterson; a beautiful country around, crowned by one of the highest peaks of the Neversink; and the Palisadoes and highlands of the Hudson beyond. A pretty perch indeed for the summer residence of one inclined either to hard digging or the sentimental.

The Town.—Paterson contains upward of 11,000 inhabitants, and is one of the most thriving manufacturing towns in the United States. The manufactories are of great variety, embracing iron, cotton, hemp, flax, silk, woollen, paper, and saw and flouring mills. Here are the celebrated falls of the Passaic, 70 feet high. They alone annually attract many visitors. The water of the river is used three times over from a series of cascades, with a head and fall of about 22 feet each, thus giving an immense water power. The stream is durable, and mill privileges sell at a high rate. We presume that Mr. Colt's income from this source alone is not less than $25,000 a year.

J. S. SKINNER, ESQ.—We learn with regret that this veteran of the agricultural press has been displaced as third assistant in the Post Office Department at Washington, on political grounds alone. For a quarter of a century or more, Mr. Skinner has been one of the most efficient friends of the agricultural cause, and we must confess our astonishment that he should be one of the first to be proscribed on the advent of a new incumbent to the Executive chair. Under the late President, another efficient writer and friend to agriculture, Solon Robinson, was dismissed from the office of Deputy Post Master of his town, simply because his politics were not agreeable to that dynasty. Mr. R., we believe, is pretty independent of government patronage; but not so with Mr Skinner. We trust, however, that both of these gentlemen will find ample reward in their future labors, and that they may be so successful in all their subsequent business, as to esteem it fortunate rather than the contrary that they were deprived of their offices.

THE AMERICAN HERD-BOOK.—To accommodate such Short-Horn breeders as wish to insert the pedigrees of the increase of their herds this spring, in the pages of this work, it will be kept open till the 1st of July next, by which time it is to be hoped that all who wish to register their cattle will forward their respective pedigrees. The lists are fast coming in, and it will be a source of pleasure to the subscriber to make them as numerous as possible, that the array of American Short-Horns shall at least show some sort of respectability to their friends on the other side of the Atlantic. L. F. ALLEN.

Black Rock, N. Y., April, 1845.

Lasteyrie's Treatise upon the Merino Sheep and Wool of Spain.—Traité sur les Bêtes à Laine d'Espagne. Par Charles Philbert Lasteyrie, à Paris.—We particularly desire any of our readers who may know where this work is to be had in the United States, to immediately inform us, and we shall be very much obliged. We would also like to obtain Cully and Cline on breeding.

REMEDY FOR DISEASED PEACH TREES.

ACCIDENT sometimes suggests a lucky thought, leading to useful experiments. A gentleman of observing mind in my neighborhood, Mr. Robert P. Mills, was examining some young peach trees at a time when the *brine* in which walnuts for pickles had been soaked was brought out of the house to be thrown away. He directed this to be poured on the body of a tree very much diseased and gummy, where the stem entered the ground below the surface. He scraped away the earth around the body, forming a cup-like cavity, and without removing the exuded gum or the worms, poured the remainder of the brine, impregnated with the walnuts, into it, so as to immerse the wounded part of the stem. The wounds on the tree have healed, and it is now in a healthy state, while others of the same age and near it which were similarly affected still remain diseased.

Whether the effect of the above experiment is to be attributed to the saturated solution of salt, or to the qualities imparted to it by the *white walnuts* soaked in it, or to both, can only be determined by experiments. But one thing I know, that while certain vegetables are fed upon, and even inhabited by certain worms, insects, flies, and bugs, other vegetables are never disturbed, approached, or inhabited by those same creatures. Each race of animals seems to be confined to certain genera of plants, while other plants may not only be offensive but actually poisonous to them. The green leaves of both the black and white walnut are, I know, extremely offensive to fleas, and to the flies of the woods and prairies, so annoying to cattle and horses in the warm weather of our summer months; and the outer rind of the young fruit possesses the same qualities as the green leaves and bark of the tree. If the odor or taste of plants, to which certain creatures have an *instinctive antipathy*, are artificially imparted to those on which they live or feed, it is rational to conclude *à priori* [reasoning from this], that they would leave the individual plants, thus treated, unmolested, mistaking them for plants to which they have a natural aversion.

Now, many experiments made by the most distinguished botanists, and persons skilled in vegetable physiology, have established the fact, that the *spongioles* of plants have no elective power of rejecting substances held in solution, and presented to them. The most active poisons, narcotics and acids, are absorbed by them, and enter the circulation. Vegetables as well as animals may be poisoned. The desideratum seems to be the discovery of substances for solution and absorption offensive to the creatures that injure the plant, and which will not be deleterious to the plant itself. Whether these conditions can be united, time and experiments must determine. All such problems are worthy of attempts to solve them. No doubt the creatures that infest plants may be destroyed by outward applications which may not enter the vegetable circulation. But in this case the remedy is more temporary, and besides may not reach or come in contact with the intended victims.

JOHN LEWIS.

Llangollen, Ky., Feb. 5, 1845.

The suggestions of our correspondent we deem highly valuable, and on showing his manuscript to one of our friends, he determined at once on making some experiments with a view of testing the possibility of giving a series of plants and shrubs, substances inimical to the creatures injuring them but not injurious to the plants and shrubs themselves. This has been frequently done by English farmers in one instance, namely, soaking turnip seed in oil and sulphur. The first leaves of the turnip partake of this compound, and the smell or taste being inimical to the fly, it shoots up unmolested. Black and white walnut trees being disagreeable to flies, should induce the farmers to cultivate them as shade trees in their pastures. The hint is well worth adopting on the prairies of the West; and growing the soft shell-bark hickory nuts would be a profitable business. We have seen highly productive orchards of these trees in Connecticut which were cultivated expressly for their fruit. We have been told by observing farmers, that the whortleberry, sweet fern, and some other kinds of shrubs, would not grow under the shade of the butternut tree; and we well recollect often seeing this confirmed, particularly in pasture land, where, out of the shade, and in the immediate vicinity of the butternut trees, these shrubs grew thick and rank.

SOUTHERN GRASS, FRUIT, STOCK, AND COTTON CONVENTION.

Grass.—At your request, made some twelve months since, I now say a few words on the domestic grasses in the Tennessee valley. By reference to No. 1., Vol. 3, of your paper, you will see a general description of the soil and productions of this country; one additional word about the country. Originally it was covered with a strong coat of barren grass, common to all the Southwest. This grass afforded fine pasture from early in the spring till July; it then became dry and tough, and was not relished by stock. So soon as the valley was well peopled it disappeared, though now plentiful in the adjacent range of mountains, because they are not much settled. Stock can now be sustained there to considerable extent, and that region will ere long be filled with sheep.

From my practice and observations, I am not inclined to think that any of the domestic grasses will do first rate here. Blue grass will live, when protected by some shade, but makes no growth from May till October; hence it is worth little for grazing. Herds grass does tolerably well on high and low land, and affords more grazing the year through than any grass I have noticed. Meadow oat is a larger, bolder grass, but grows in bunches. It is not so nutritive in my opinion. Orchard grass does not do well; and in truth I have never seen a full stand of it anywhere. I have never seen a lot of timothy in this country. Red clover produces one good crop a year. It blooms the first of May, is in perfection in June, dries up in July, and is of no further use till next spring. It grows strong and luxuriantly, and affords more pasture while it is in season than any other grass. It will maintain a good stand for four or five years without plowing the ground, and pastured every year. It is the best fertilizer we have of the grass family, though not to compare with the stock pea sown broad-cast. We have an English blue grass, that does not spread from the root, four times as large as the common blue grass. It litters or grows in bunches, and resembles the orchard grass in size and character. It is sown in August or September, and makes good pasture the following win-

ter. Stock are fond of it, and it is a certain seed bearer. Experiments are yet limited in it, and I am not prepared to make up a definite opinion of its merits. One of the principal reliances for pasture is the crab grass, common to all the cultivated land. It will do to graze the last of May, and continues good till frost, and is not so much affected by drought as the other grasses.

Stock.—As to domestic animals, we have a share of all the improved blood of the Union. In the horse line, North Alabama has for a number of years held a conspicuous place, and has some of the best breeding studs of turf horses in the Southwest. Messrs. Jackson and Kirkman, of Florence, have taken the lead at all the southern tracts, New Orleans not excepted. We keep but few cattle, as beef is not much used. We have some good Durhams—a few imported direct from England. We have a few of most of the varieties of sheep, but they are not managed with any care; they are kept for domestic use. No effort to grow wool for market yet, but there is some talk on that subject. I prefer a cross between the Merino and long wool (Bakewell or Cotswold) for general use; some are in favor of Southdown—I am in favor of their hardy compact form, but opposed to their harsh fleece.

Fruit.—As to fruits, we have some of most varieties, but I cannot speak definitely of any, save peaches. It is a splendid soil for them. Cherries have done well. Plums very well, except the large blue kinds. Apples are not numerous; but I think most kinds will do well except in very dry summers; they will then *sun-burn*, and fall off before mature. Pears are very scarce, and I doubt their success, except a few of the early kinds; they seem to be uncertain bearers in this climate. We have not given that attention to fruits and vegetables that we should have done. We have been tied down to cotton, a crop that occupies us the entire year. But this must be stopped. We are over-producing, and have now stocked the world with cotton, and are our own destroyers. The number of *acres* must be *cut short* till we reduce the average crop to 1,800,000 bales. Some change must take place or the South is bankrupt.

A Cotton Convention,—I would suggest the idea of holding cotton-planter's conventions at the three great southern seaports, New Orleans, Mobile, and Charleston, early next fall. Let every cotton-growing county send its delegates, and if the three conventions did not agree in their separate capacities about the amount that must be cut off from every man's crop, let these conventions appoint delegates to a central convention at Tuscaloosa, there to determine on the proportion to be cut short. This to be binding on all the cotton-growing regions. But let each of the three conventions adopt their own rules and regulations to carry this into effect. I would suggest one-third as a proper quantity to cut off, and that each county have its surveyors to inspect every farm in the county, and if any planter violated the rule, to *burn* all the cotton produced by such violation. The benefits resulting from this plan would be these. With two-thirds of the force, land, team, &c., now employed in growing cotton, every planter of cotton would *pocket* from one-third to one-half more *money yearly*, and would have one-third of his force to improve his land, grow provisions, or employ it in any other branch of industry he might think proper. There is not a sane cotton-planter in the South that will deny the truth of this position; if all acknowledge its benefits we certainly can carry it into effect. Nothing is wanting but action. Shall it be said that we are asleep and will not pursue our own interest? Not only our interest, but our salvation as planters! If the fact was known, that there had been but 1,800,000 bales produced the past season, cotton would be worth eight cents before the sun could set upon the news. Let us then have a *certainty* and *no mistake*, that there will be but 1,800,000, produced next year; then we can get a fair compensation for our labor, and not till then. I may recur to this subject again. I wish to give the ball a push. G. L. Cockrill.

Tuscumbia, Ala., Jan. 29, 1845.

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We admire the spirit of our correspondent in regard to his proposed convention, and hope that it may be carried into effect. Raising less cotton and more of other products, is what we have contended for, ever since we started this journal. If the South did this, its people would grow rich in defiance of the whole world. The manufactures of Massachusetts alone are of more value than the whole cotton crop of the South. What would become of this very wealthy, intelligent, and highly independent little state, if she abandoned these, and devoted herself exclusively to corn and grass, her greatest agricultural products? *Poverty, ignorance* and *dependence*, would be the necessary result, without the shadow of doubt.

GUANO AND ITS USES.

Exhaustion of Lands.—I am much surprised at the opposition and the numerous objections constantly brought forward against the use of guano, most of them unfounded—many perfectly absurd; for if large quantities could be brought here, one general benefit must accrue to the farmers, even to those who could not use it; viz., a decrease in the price of the manure, which is sold in large quantities in the vicinity of all populous cities. One of the chief of these objections is, *that it will exhaust the soil;* however, before I show conclusively that this cannot be the case, permit me to discuss this question of "exhaustion," on which our farmers have often very wrong impressions. Much practical good may be learned on this subject from the gardeners who grow vegetables for the markets; they never have an idea of *exhausting* the soil, and many obtain three and even four crops from the same piece of land every year.

I am well aware that under the existing ideas of rotation of crops, &c., it is expected that after two years' manuring and cropping, virtue enough should be left in the soil to bear a good result of grass the third year without manure; but it would certainly be better to get off three luxuriant crops successively. I should wish to exhaust my land completely every year; to take off everything the manure put on will allow, leaving none of it to be washed away, and be useless by the winter flood and draining. I would not only take away all the manure put on in the shape of crops, but all that this manure would enable me to take in addition from soil and atmosphere; and by proper management, I do not doubt that this may be done with grass. An analysis will soon show what is requisite to be added after each so called exhaustion.

Application of Guano to Corn.—Take a sandy

sterile piece of land, plant it with Indian corn, and manure at the rate of one and a half ounce per hill. Of this ounce and a half, about one-fourth consists of the ammoniacal salts; all this, with the exception perhaps of a small portion of humate of ammonia, is used by the crop; then one-third consists of phosphate and oxalate of lime, and phosphate of magnesia. This is used by the crop chiefly for the purpose of forming the embryo or sprout of the seed. Now as only about one-third of the substance of these embryos or sprouts of the seed consists of the phosphates, it is quite clear that it would take several millions of them to use up 33 per cent. of an ounce and a half; therefore, a large portion of these phosphates remain unused in the soil, ready for another crop. We then come to one-eighth or one-tenth of soda and potash salts; of these, perhaps, five-eighths or three-quarters is used for the crop, the remainder is left in the soil. The rest of the guano being chiefly moisture, land and animal matter, need not enter into our calculation.

The position then is, that each year of manuring with guano, luxuriant crops are taken off, leaving still in the soil a large proportion of the phosphates, and small proportions of the soda, potash, and ammonia. Now in what ingredients is barn and stable manure chiefly deficient? Why, in phosphates. This is proved not only by analysis of the manure, but by the practice of English agriculture; for, after several years' cropping, land, however highly manured with it, will not bear good crops of wheat without an additional supply of phosphates, which is afforded by an application of ground bones. Therefore, if land is manured three or four years in succession with guano, and afterwards with barn and stable manure, there will be an accumulation from the former remaining in the soil, of exactly those ingredients in which the latter is most deficient, and this seems to me to settle the question of exhaustion.

Artificial Guano.—There is another objection to guano, which is, that we can make an artificial guano as good and cheaper. There is no doubt that after chemical analysis has ascertained the ingredients of guano, if we mix these ingredients together, from whatever source they are obtained, in about the same proportion, we shall make a manure of almost equal value. But suppose only the small quantity of one hundred thousand tons of this artificial manure were wanted in this country, if the ingredients could be obtained at all, would not their value be so much enhanced by this demand as to render the price no longer economical? The recommendation of the use of guano by no means implies that the other manure of a farm should remain idle; far from it. On the contrary, the study and knowledge of this subject will prove to the farmer the value of much that has been hitherto totally disregarded as manure, and will show him that if the ammonia of guano has lain so long in a tropical region undissipated, he can also fix and preserve the ammonia which is necessarily derived from every living being on the farm.

I trust this subject of the exhaustion of soils will receive the earnest attention of the practical farmers this year. If they would lay aside a little of their preconceived notions respecting exhaustion, rotation, &c., and constantly experiment judiciously and carefully on five or ten acres, they would always be learning something, and always improving, by the exercise of their powers of judgment and discrimination.

J. E. TESCHEMACHER.

Boston, Mass., March 11, 1845.

WESTERN CALENDAR FOR MAY.

IF the corn crop shall not have been all planted in April, it should be completed as early as possible in this month. If planted even late in this month, in good ground, it will have full time to mature, before frost, in latitude 39°; but late planting is more liable to be injured by drouth. During this month the plows and hoes should be diligently employed, in the cultivation of the corn crop. The more this crop is worked the better, but the plows and hoes *must be stopped* whenever the ground is so wet as to make it clog. Unless in cases of urgent necessity, the corn should not be plowed soon after heavy rains. It is best to wait patiently till the soil is dry enough to pulverise finely. In the meantime the hands may be employed in getting fire wood for summer use, splitting rails, making fences, &c.

This is the proper month for putting mares to horses and jacks. The colts will then come in April, when the mares can begin to get a good bite of green food. Early colts do best, because they will attain more maturity before the winter sets in, and can be carried through that most trying period for young stock, in better condition. In this month, also, sows should be put to the boar, when it is desirable to have fall pigs. But if farmers desire that their sows should have but one litter in a year, it should be so arranged as to make the pigs come from the middle of March to the last of May.

In this month the pastures are luxuriant, and all kinds of stock can have an abundance of green food, and consequently need a full supply of salt. A half pound per week is the proper allowance for full grown bullocks per head. The smaller cattle, sheep, horses, cows, &c., should have a proportionable allowance. Hogs do not eat much salt. But all stock should have a full supply, *once*, but still better, *twice a week.*

RAISING CORN, POTATOES, AND PUMPKINS, IN ALTERNATE ROWS.—Mr. Muir, of this town, gave me an interesting account of an experiment made by himself in 1837, in planting one acre of land with corn, potatoes, and pumpkins, which was as follows: The land was plowed from 6 to 8 inches deep, well harrowed, and a light coat of manure spread on and harrowed in well. The land furrowed lightly 2½ feet apart, and planted one row of corn, and the next potatoes, alternating them to the sixth row, which he planted with pumpkins. Thus every other row being corn and potatoes, except the sixth, which was pumpkins, throughout the field. The corn in the rows stood only one stalk in a place, in this manner: . . . . . One cornstalk, and then a space of 6 or 8 inches to another; then a space of 14 to 16 inches. The potatoes and pumpkins were planted as thick as they would bear, but he did not describe the manner. The amount of produce from the acre was as follows: 187 bushels of corn in the ear; 153 bushels potatoes; and 100 cart loads of West India pumpkins.

He has since followed a similar course, and is satisfied that this is the best way for him to get the most profit from his land.

E. P.

Essex Co., N. Y., March 25th, 1845.

THE SAFARU-PEACH.

While passing a few months on Teneriffe, some years ago, I was particularly attracted by the excellence of the peaches of that island. Among those of the finest quality was the Safaru-peach, which, in point of flavor, smallness of stone, abundance of juice, and beauty of form, in the opinion of the Spaniards, is not equalled by any other variety. The size, color, and general external appearance, as far as my recollection serves me, greatly resembled Rodman's cling-stone, denoted by the following cut:

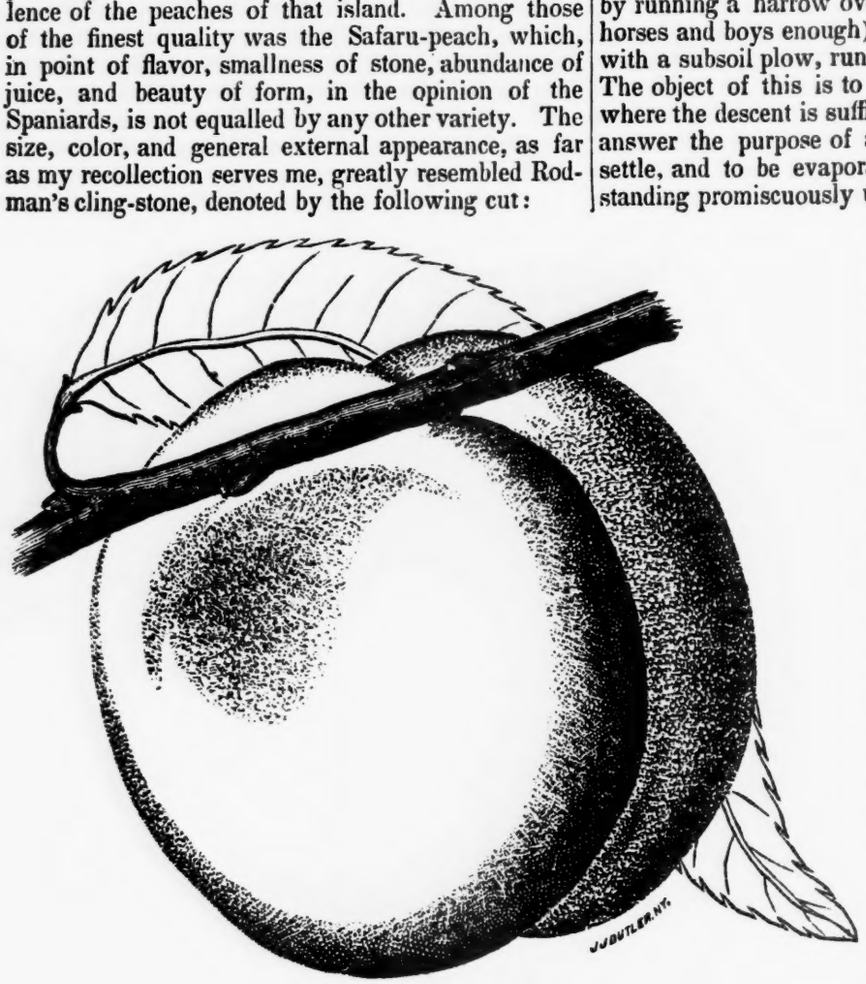

Fig. 46.

This peach is said to have originated in Spain about the middle of the IXth century, by the Arabian monarch, Abdurrahman. The envoy whom he sent to Syria for his two sisters, brought back many rarities, among which were some peaches from the gardens of Arrusafat. Being proud of this fruit, the monarch showed it to his friends, and presented one to Safaru-bn Ulbaid, who was so delighted with its flavor, that he preserved the stone, from which he raised a tree that ever after bore his name. This variety is still cultivated in some parts of Spain, and fully merits all the praise bestowed upon it. B.

New York, 15th April, 1845.

HOW TO WORK CLAY LAND.

You know, by several years' experience, the troubles and difficulties to be encountered in cultivating a farm with a stiff clay subsoil, and that too without the aid of a subsoil plow. The object of this is to get an expression of your opinion, founded partly on your own experience, and partly on the theory which has grown out of that experience, and the experience of those who have used these plows, whether they may not be advantageously used in the following manner: After the ground which is designed for a crop of corn or potatoes is prepared for planting, let it be furrowed out the distance you wish your rows apart, then plow a deep furrow the other way with a common sized plow, say four feet apart (I have land enough to spare); then level these last furrows by running a harrow over them lengthwise (I have horses and boys enough); then follow these furrows with a subsoil plow, running it as deep as possible. The object of this is to carry off the surface water where the descent is sufficient, and where it is not, to answer the purpose of a reservoir for the water to settle, and to be evaporated by the sun, instead of standing promiscuously upon the roots of the crops. There will be no need of marking out the ground the way the subsoil furrows run; the eye will guide the fingers in dropping the seed equi-distant between the subsoil furrows. I propose using the harrow in cultivating the crop, letting the horse walk in the subsoil furrows, and using the hoe only to cut up the weeds left by the harrow near the hills, and to earth the potatoes (not the corn) a little, as I approve of keeping the seed, and subsequently the roots, near the surface; and if the ground be well manured, as I intend it shall be, and often stirred with the harrow, there will be no danger of drouth. I know you will say, subsoil plow all your grounds, and then plant in the usual way; but this I cannot afford to do. If you don't like my plan, say so, and give your reasons. If you do like it, or can suggest some improvement short of plowing up the whole ground, say that, and send me a subsoil plow of suitable size, and call on my agent in your city for the cash. A Novice.

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Thorough draining after the Scotch method, as detailed by Mr. Norton, page 330 of our last volume, is the only complete and certain method of getting rid of the surface water which stands on stiff clay soils. But we suppose he thinks he cannot afford this, and for a partial remedy he may do well to follow his own plan. We formerly pursued a tolerably successful method of cultivating a clay soil, by laying it up into lands of four to six furrows, cleaning out the wide open furrows well between them. From these lands, balks, or ridges—as they are variously termed—the water would readily filter through to the wide open furrows on each side, and then run off, if there were declivity enough to do so; otherwise it would stand there till evaporated. Of course, if these are deepened with the subsoil plow it will add to their power as drains. We have sent our correspondent a subsoil plow as requested, but advise him to keep his land in permanent grass as much as possible; this is decidedly the best crop on a stiff clay soil, not only in this country, but even in England, where produce is worth double our prices.

European Agriculture—No. 3.

My last letter was dated from Rome, which city we left soon after for Naples. The country between Rome and Naples is generally level, and is well cultivated with vines and wheat.

The Vine.—This is not cultivated here as in Genoa, but is trained in graceful festoons upon and between trees planted for the purpose, at a distance of some fifteen or twenty feet; and even at this season the effect of these extensive groves, with the festooning vine, and the bright green of the wheat beneath them, was very fine, and when in full fruit must be beautiful indeed. The vintage is said to be the most delightful season in Italy. Until a certain day, the vines are not touched by proprietor or traveller; but when the fruit is known to be matured, the day is fixed, and all commence at once. The traveller is at liberty then to pluck as many as he chooses; the peasants assume their gayest dress; men, women, and children are all in the fields; and the manly Italian laborer and the graceful peasant girl, dance around the wagons loaded with fruit, and the whole vintage is a season of festivity.

Draining Low Grounds.—Those which are wet, are very conveniently drained by furrows at the distance of some three feet apart, and are easily made, by plowing three furrows, and then a back furrow on each side of them, which thus leaves a sort of narrow trench similar to that between two lands with us, to let off the water.

Agriculture at Naples.—This is at a very low ebb; and is not owing so much to the indolence, or rather inactivity of the people, as to the exceeding richness of the soil. No peasantry will work harder than the Neapolitans, when the object is sport; but they think it scarcely worth while to bestow much labor upon the soil, when a slight degree will afford them abundant means of sustenance. I do not think that the fertile soil even of our Western States is superior to that of Naples and its vicinity. It is almost entirely volcanic, with some six or eight feet of black mould, the quality of which would lead one to suppose, that Vesuvius for ages had been throwing upon it, from the bowels of the earth, all the elements of fertility. Flax is much grown in the vicinity, and also a species of lupin of rapid growth and very succulent, which is cut, and given green to the cattle. Lucerne is also much used; and, as I was told, is frequently cut six or eight times in the season. There is some horticultural taste here, a very excellent botanic garden, and a number of beautiful villas. Tenore, the director of the botanic garden, is a man of much intelligence, and gave me some valuable information. He much regretted the deficiency of enterprise among the Neapolitans on these points. There are no works whatever here on horticulture, and but two or three on general agriculture.

Stock.—There is not much in the vicinity of Naples very excellent in the way of stock, with the exception of their beautiful and delicate breed of pigs, possessing the compact form of the Berkshires, without their size and grossness. I very much doubt, however, whether they would thrive well in our climate. They have a nice but small breed of horses, which possess no remarkable qualities, and will not compare with the Roman horses. Jacks and mules are much used as beasts of burden, and I saw some noble specimens of the latter nearly sixteen hands high. The cows are nothing superior, but give good milk and butter. The latter is monopolized entirely by the king, and every roll bears his arms. For vegetation the climate of Naples is perhaps one of the finest in the world—with just sufficient winter to give plants a proper rest and vigor; and nothing but skill and industry are wanting to make it inferior to none in agriculture.

The Olive.—I ought to mention that there are some fine olive groves near Naples, containing large trees, one (tree) of which is said to have produced *fourteen hundred* gallons of oil. This tree succeeds better in Italy than in the south of France, where the crop is very precarious, being sometimes cut off by the frost. Being thus tender—more so in fact than the orange—it would scarcely answer for introduction, except into our milder southern States, for even in Florida the orange orchards are occasionally destroyed by frost.

Silk.—Near the palace at Caserta, is also a silk manufactory belonging to the King, where a considerable number of hands are employed, and superior velvet and silk are made.

A Cascina.—On arriving at Leghorn, we visited Pisa, celebrated for its leaning tower, and found there a large Cascina or royal farm. It belongs to the Duke of Tuscany, and is celebrated for its camels, which were presented by the Pacha to the former duke, and which breed here. There are now some forty-three of them, and they are used on the farm for carrying burdens. They are, however, adapted only to the desert, and are of very little use in a country like this. We mounted one of them and took a short ride, but found his gait very unpleasant. In a long ride it must be fatiguing. On this farm there are about one hundred cows, of the breed of the country (Tuscan). They are generally fine, clean-limbed animals, and some of large size. There is, however, no uniformity among them, and some were quite inferior. I noticed one noble, Short-Horn cow, showing many fine points. These cows give about fourteen quarts of milk per day, ten quarts of which make a pound of butter; thus showing its superior richness. There were some fine oxen and steers, a few sheep, and about fifty poor horses. The farm buildings are poor and inconvenient. There are many fine cork trees, and long avenues of the maritime pine, the seed of which is roasted and eaten by the poorer classes. Here, as in France, every proprietor is obliged by law to plant a certain number of trees for all that he cuts down; and thus a continual supply of firewood is kept up, which, in a country so destitute of coal, is a matter of no slight importance.

Valley of the Arno.—The part between Leghorn and Florence is low and wet, lying below the level of the mountain streams, from which its fields are protected by dykes. In these dykes are flood-gates by which the farmers can at pleasure irrigate their fields. The fields are highly cultivated with wheat in ridges, as at Naples. Rows of trees, covered with vines gracefully festooned over and between them, are spread through the country. Occasional fig, cherry, and other fruit trees were seen, and the whole valley bore the aspect of great fertility and high cultivation. Near Florence the country is more hilly, but cultivated to the very summit with olives, vines, and wheat, and thickly dotted with farm-houses and

villas. Hay-stacks were numerous; some with the hay partly cut out, very much as described by the poet Cowper, and presenting a singular appearance to an American eye. Many peasants were on the road, returning from their work, and their appearance fully sustained the character given to the Tuscan peasantry. The men had fine features and a bright and intelligent look, while the women were uniformly graceful and handsome, with that glowing complexion, bright eye, and arched eyebrow, peculiar to northern Italy. Some of them were walking, and others riding on donkeys, seated as near the rear end as they could well get without falling of. The vicinity of Florence is thickly studded with villas and country-seats, most of them handsomely laid out in the Italian artificial style, and presenting, as you ride through the country, a succession of fine farms and beautiful gardens.

Florence.—This is a beautiful city, and may well be called the fairest in Italy. The public and private galleries are filled with the choicest paintings and statuary, and statues are scattered everywhere about the city. There is nothing in any of the collections, however, that will bear comparison with the best works of Powers, the American artist, whose studio we visited. He is a bright-looking man, and shows in his eye much of the fire of genius. He was just finishing off two most exquisite statues, of that rare and beautiful character, that one could examine every day for a month with increasing pleasure. One is a full-sized Eve, standing with the apple in her outstretched hand, her face exquisitely beautiful, presenting a masterly expression of innocence hesitating at guilt. It may be deemed the best effort of Powers' chisel, and it is hoped will go to America. Its value is $3000. The other statue is a fisher's boy, holding a shell to his ear, and is a superior piece of workmanship. The attitude and expression of listening are capital. A bust of Proserpine is also very excellent.

Padua.—From Florence to Padua the country is very flat, and irrigated by water introduced from the Po and Adige. Lombardy poplars line the road, and basket willows are planted in wet spots, and also in the fields for vines to be trained upon. Padua is a fine town, and possesses the best botanic garden and conservatories that I have yet seen. It has a fine specimen of the gingko biloba, some thirty feet high. It is probably the oldest botanic garden in the world.

Venice.—From Padua we went by railroad within a few miles of Venice, and thence by gondola to this singular city of the sea, so beautifully described by the poetic pen of Rogers. Its splendid palaces, the Rialto, the chamber of Secret Council, the Bridge of Sighs, and all the other relics of its ancient splendor and power, were seen to great advantage as our gondola swept by them, impelled by two muscular gondoliers, who wielded their oars with no little grace. No animals are seen in the streets excepting an occasional dog or cat; no carts are heard; and no noise but the hum of voices or the plash of an oar as the gondola glides swiftly by. It is a singular city, and one of great interest.

Lombardy.—From Padua to Milan, and, in fact, throughout Lombardy, the country is very highly cultivated, and irrigated in every direction, at the pleasure of the owner, by means of canals from Lake Como, and several rivers. The meadows were in consequence beautifully green, though early in March; and they were cutting the first crop of grass, to be followed by four others during the season. Here we saw on the road, numbers of the beautiful large oxen of Lombardy, uniformly of a cream color. They have fine bones, clean limbs, and, as far as I could judge, are equal to anything we have in America. The country about Milan contains some of the best farms in Italy, and Lombardy in this respect excels anything I have yet seen on this side of the Atlantic.

We start in a day or two on our journey across the Alps; where, I fear, I shall scarcely find much in an agricultural way, that will interest the readers of the Agriculturist. S. B. PARSONS.

Milan, March 16, 1845.

GREAT SALE OF SHORT-HORN CATTLE IN ENGLAND.—By reference to our advertising pages, it will be seen that three large and very fine herds of Short-Horn cattle are offered for sale in England. We had the advantage, in August, 1841, of looking over Earl Spencer's stock of cattle, on his beautiful estate at Wiseton, and can highly recommend them from our personal minute observation. A sample of his herd was seen at the New York State Agricultural Society show at Poughkeepsie, last fall, also at the cattle show of the American Institute, in Mr. Oliver's superb young bull, Marius, which took the first premiums at both of these meetings, as the best animal in his class.

Earl Spencer is one of the most distinguished agriculturists and noblemen in England—celebrated alike for his talents, virtues, and retiring modesty of disposition. When Lord Althorp, he was for some time leader of the Whig party in the House of Commons, and the great advocate of the reform bill. He held a distinguished post in the ministry of Earl Gray, and is the untiring advocate of the abolition of the odious Corn Laws of Great Britain. He is again President of the English Agricultural Society, for the second time—is quite celebrated for his beautiful herd of Short-Horn cattle, and has earned the enviable title throughout his country, of the "farmer's friend." We wish his lordship a good sale, as well as Messrs. Hutton and Watson. We have seen some of the animals of these last named gentlemen, and can commend them to the attention of American breeders.

BLACK SEA WHEAT.—I herewith send you a sample of Black Sea wheat raised by me. It was sown on the 25th of last May, and reaped on the 29th August. It was not attacked by the rust or fly. Much of this kind of wheat has been raised the past season by the farmers in the vicinity of Montreal, and, from the information I have been able to collect, they propose sowing no other kind of wheat this spring.

M. J. HAYS.

Metcalf Farm, Coté St. Antoine, Montreal, C. E., March 19, 1845.

We presented this sample of wheat, sent us by our correspondent, to a friend in this vicinity, who immediately sowed it, and will let us know in the autumn how it succeeds in this section of the country. All accounts seem to agree that it is a valuable spring variety, especially for the more northern farmers.

Ladies' Department.

SUNFLOWER SEED FOR POULTRY.

BY MRS. KIRKLAND.

In a certain garden not very well kept, it so happened that a great number of sunflowers sprang up; and as weeds were not lacking in the rich soil, the intruders escaped notice, until they grew so stout that it seemed a pity to pull them up, especially as there were few pretty things to supply their places. Tall hollyhocks there were, and four o'clocks, and here and there a yellow lily; while rhubarb run to seed, and stray heads of asparagus, spoke of neglect and indifference in the owner. Melon vines were allowed to straggle across the paths, and not a few great, staring, yellow pumpkin blossoms mingled with the signs of choice fruits, threatening utter destruction to melons of all kinds, by the intermingling of improper farina. But nobody thought of these things. "The garden" is too often a despised part of the thriving farm; and both beauty and comfort are unnecessarily sacrificed, from the mistaken idea that the time spent in gardening is wasted, or has at best only the reward of "pleasing the women folks."

Harvest time came, and now all idea of introducing any reform in the garden was out of the question. The melons, as they ripened, proved very much like squashes. The weeds all went comfortably to seed, and lived to see an infant crop begin to sprout up, green and tender, about their tough old stems, even before the frost had had time to despoil the parent heads of their branches. Some borders of stone crop with which certain beds, the objects of female care, had been ornamented, had expanded into wide banks of shaded green velvet—the only beautiful result of neglect in a garden. The girls had become quite discouraged, seeing the work get so far ahead of them for want of some aid from strong arms.

Fanny L—— sat in the window which overlooked this wilderness of weeds, gazing musingly, and with no slight touch of sadness, at the ruin which had enveloped the scene of her pleasant spring dreams. She saw whole broods of fowls scratching and half burying themselves in the midst of her pretty jonquils and other early bulbs; and she had not the heart to go and drive them away; for, as girls in the country often say, "where's the use?" if father or brothers will not secure either the garden or the fowls so as to keep them apart.

Presently she observed a great commotion among the sunflowers. These staring luminaries had grown very variously, some tall and mast-like, others stunted and slender, with small and poor heads. But these less favored specimens seemed more agitated than their more lofty brethren; and upon closer scrutiny Fanny observed that a detachment from the fowl army were attacking the sunflowers in the most energetic manner, springing up at them, to the very extent of their ability, and nipping them so shrewdly that the great black heads were fain to bow at each fresh attack.

After noticing this new warfare several times, it struck our young gardener that there must be something very attractive in the food for which the chickens were willing to work so hard; and she determined to make a little experiment as to the value of it. So without saying anything of her intentions, she decapitated all the sunflowers which had been too high for the fowls to reach, using for their stubborn necks her brother's little hatchet; and when she had deposited them in certain empty barrels in the barn, she contrived to have a portion of the fowls shut up, and fed them every day with a good portion of the sunflower seed, in addition to the coarse food which they shared with the rest, and a pan of water daily.

The very first time a dish of fowls was wanted for dinner, Fanny sacrificed a pair of her stock, and she was delighted to hear her father ask, "Why, wife! what fowls are these? We never had anything like 'em before! Where did you get 'em? Their flesh is as tender and juicy as can be, and they are as fat as butter!"

Fanny now told her little story, and as she had noticed an exact proportion between the size and richness of the seed and the quality of the soil in which the plants happened to stand, her father was induced the next year to manure a patch purposely for sunflowers, and to cultivate them with express reference to the improvement of his fowls.

Since that time this provision has not been neglected; and although some of the neighbors refuse to believe that sunflower seeds can make any difference in the juiciness of "chicken meat," yet they cannot deny that Mr. L——'s fowls are the best—far the best in the neighborhood; and Fanny's observation of an apparently trifling fact has brought many a dollar to her father's pocket, to say nothing of providing a home-bred delicacy for the table.

Now, Mr. Editor, I have recounted Fanny's experiment in all simplicity; wishing to know from some of your numerous and practical correspondents, whether they have ever made a similar one with like results—since we must not think that one fact makes a theory, any more than one swallow a summer.

To Preserve Fresh Meat.—As hot weather is approaching, it is important to those who are so situated that they cannot always procure fresh meat when wanted, to know how to preserve it. The ordinary method of putting it in an ice-house, down the well, and other cool places, keeps it but a short time; but in this suggested by the National Gazette, it may be kept sweet for years:

"For household purposes the most convenient way will be to provide a number of earthenware jars, with ground covers and a small hole in each cover, like that in a tea-pot, which may be stopped easily. The meat may be first partly boiled and deprived of its bones, and be then put, with part of the liquor, into the jars, which must be set in a pan of warm water and gradually brought to a boil. When the steam is rising from the jars the covers must be put on them and fixed down air-tight, the steam generated in the meantime being suffered to escape from the lids. Finally, the pan must be removed from the fire, the holes in the lids stopped with small corks, and these corks waxed over to make them more impenetrable. It may also be a good precaution to run a little melted wax round the edge of each cover, to obviate the leakage due to any imperfection of the surfaces in contact. Meat might also be preserved by repeatedly dipping it in melted fat, the same as they do candles, till it had a protecting coat of tallow which the air could not penetrate. Vegetables may be preserved in jars as above, as well as meat."

Boys' Department.

A WORD TO THE SMALL BOYS.

"All work and no play,
Makes Jack a dull boy:
All play and no work
Makes him a mere toy."

Well, boys, Mr. Allen has very kindly given two or three pages every month, for your special benefit. After you have read the Boys' Department, the first thing to be done is, to see that you have other books to read and study, such as you can understand, and such as will give you valuable information—the Child's Book of History, Peter Parley's Geography, Colburn's Arithmetic, Marco Polo's Travels. Books for parents and their children, and such kinds of books, not silly stories, you must be well supplied with. And then see to it that you spend some time *every day*, in reading and study. This is absolutely essential, if you ever intend to make good farmers, and good men. And I take it you are going to be farmers, and not professional men.

Then next you must see that you have an axe, a hoe, a rake, and all tools, just suitable to your age and strength. Do not try to chop with your father's axe, nor use any of his tools; tell him it is no reason why you should not have light tools, because he had to use his father's. *See to it that you have the proper tools*, and that they are in the very best order. Then have a place for every tool, and for every book, and when you have finished using it for the time being, put it in its place, so you can go right to it in the dark.

Now for using them. Learn to do one thing at a time. When you read or study, do not get all your books about. Take one book and read in that from day to day, till it is finished, and then another, and so on. And be sure to read the Boys' Department in the paper as soon as your father gets it from the office. When you work, have some one kind of work, and stick to that till it is finished, and till the time is up. Do not begin to chop one stick and then run off to find a softer one; or think you must go to read or study, or go a fishing, or make a poultry-house. Finish that stick of wood, no matter if it is hard; leave it not. So, when you read or study, do not think you want to use your hoe then, or ride the horse to water, or anything else, but study. *One thing at a time, and that thing for the time.* If you need help, that is, directions about your books or about your work, or your play, your parents will always give it to you. But when you are told sufficiently, then do it up, and do it yourself. At proper times, you can have your sports—go a fishing, play ball, make a pigeon-house, tame your rabbits, feed your chickens, &c., &c. Do that up thoroughly when you are about it; and do your work and your study just as thoroughly when their times come. Be cheerful and lively at each. Do not say you are tired, or hot, or lazy, when it is time to bring in the wood, or hoe in the garden. Do not ask to get away till the work is finished. Be sure, if you do just right you will have abundance of time for all your little matters, and will be happy about it too. There, that will do for this time. If Mr. Allen prints this I may talk some more with you. T.

Ohio, March, 1845.

CHICKEN COOPS.

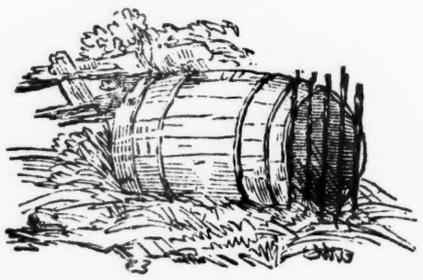

Fig. 47.

The most common method employed among farmers for the purpose of confining the hen with her young brood, is to drive stakes into the ground in front and make a pen about two feet square and cover with boards; but a better plan is to lay a flour barrel on its side, with one end out, and drive a few sticks into the ground in front. This makes a very dry and comfortable coop.

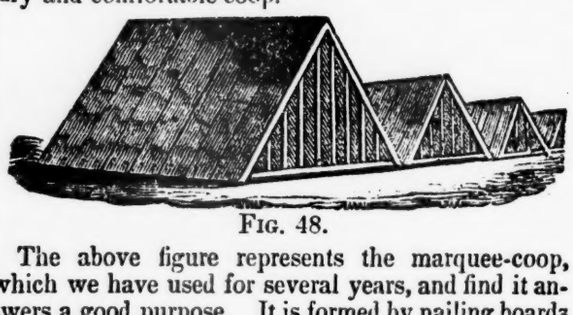

Fig. 48.

The above figure represents the marquee-coop, which we have used for several years, and find it answers a good purpose. It is formed by nailing boards two feet in length in such a way as to form two parts of a triangle, the ground forming the other, as in warm and dry weather we consider it best to have them next the earth; but early in the spring, when the weather is cold and the soil wet, a platform of boards or an old door should always be put under the coops. It should be at least two feet deep, one end be boarded up tight, and the other secured by nailing strips of lath, in the form of grates, leaving sufficient space between them for the free passage of the chicks without admitting the hen. In front there should be a broad piece of board of the same length as the front of the coop to feed them on. This board may be secured to the coop with leather hinges, so as to admit of its being raised up towards evening. This answers the double purpose of protecting the chicks against the smaller noxious vermin, such as rats, &c., during the night, and of preventing them from wandering about in the dew and wet grass in the morning.

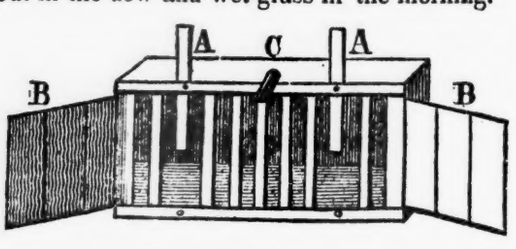

Fig. 49.

Mr. Lawrence Smith, a writer in the Cultivator, says: "The above cut is a coop of my invention. A, A, slats raised for admitting the hens; B, B, doors to open and shut at night, to prevent the intrusion of any kind of vermin; C, button for fastening the door."—*Poulterer's Companion.*

FOREIGN AGRICULTURAL NEWS.

By the steam-packets Great Western and Caledonia we have our European journals to the 5th April.

MARKETS.—*Ashes* were rather more inquired for, though slow of sale. *Cotton* has fallen the past month about the amount of duties recently taken off by the British Government, and thus the importer netts nearly the same prices as per our last. *Flour* dull. *Beef* has advanced. *Pork* remained without change. *Lard* the same. *Cheese* firm, with considerable sales. *Butter* in fair request. *Tallow* had fallen. Transactions in other things unimportant.

Money continues easy.

American Stocks.—Transactions in these suspended, in consequence of the tone assumed by the President in his late inaugural on the Oregon question. This, however, will prove a mere temporary feeling.

Business Generally not quite so brisk as per last advices.

The Weather was still cold and the spring backward. Orange, and many other trees and shrubs in the south of Europe, had sustained considerable injury from the unusually intense cold the past winter.

New Patent for Purifying Sugar.—The plan proposed by the patentee is to have a bath of solution of chloride of lime; this boils at 240 degrees Fahrenheit. The syrup, by a peculiarly formed treddle, is agitated so as to present a thin sheet of heated syrup to the air, and evaporation is carried on, according to the patentee, at a rate equal if not superior to that afforded by Mr. Howards' patent.

Great Consumption of Guano in England.—There is nothing in the history of farming so extraordinary as the consumption of guano, which is steadily and rapidly increasing in spite of all the frauds and tricks that tended to bring it into disrepute. The great houses of Gibbs, Myers, and Bright, have actually sold 18,000 tons of Peruvian guano within the last few weeks; and there will be in this country, ready for delivery, in the course of a few weeks, 200,000 tons of Peruvian and African guano.

Chinese Quinces.—In the very interesting translation of Father Ripa's account of China by Mr. Prandi, just published by Murray, he observes the quinces are larger than ours, and of exquisite flavor; the apples and pears also are so wholesome that they are given uncooked to sick persons. They consist almost entirely of juice, so that when dried in the sun, as is done in Europe, nothing but the rind remains.

To prevent Hares and Rabbits from Injuring Fruit Trees.—Take slips of rags 9 inches by 6, and dip them into melted sulphur; then fix them into cleft sticks about 2 feet in length, and plant them in the earth so as to stand 18 inches out of the ground round the quarters of apple trees, about 3 yards apart, and rabbits or hares will not come near them.

Horticultural Expedition to California.—The Horticultural Society of England is about to send Mr. Hartweg to California and the northwest coast on an exploring expedition. The discoveries in that region by Mr. Douglas seem to have given the society an inclination to learn still more of the beautiful vegetation of California.

Poultry and Eggs.—The Zoological Society of London is making arrangement for a superb exhibition of poultry at the gardens in Regent's Park. It is said that upward of 250,000 000 of eggs were imported into England from the continent in 1841, 2 and 3, and that the duty alone on imported dead poultry was £600,000 ($3,000,000) the past two years in Great Britain!

Profits of Poultry.—Mr. Arthur Young states that the women and children of the laborers on the farm of Mr. Boys attend to the poultry, and that the profits are usually £20, about $100 a year.

An Aged Pony.—A grey pony recently died near Manchester, in the 50th year of his age. This wonderful little animal was in active service up to the evening preceding his death, and once performed the extraordinary task of going from Manchester to Liverpool and back in harness, a distance of 72 miles, in six consecutive hours.

Destruction of Cattle by the Murrain.—In Monrovia alone upward of 30,000 head of cattle have been destroyed by this plague.

Horticultural Expedition to China.—Mr. Fortune, who was sent to China by the Horticultural Society, writes from Hong Kong in December last, that he was busily engaged in packing for shipment to England, many rare plants, fruits, and flowers which he had been successful in obtaining.

Value of Oatmeal as Human Food.—It will be recollected by our readers, that we adverted to this, page 89 of our current volume, and we are glad to find our remarks no less strongly than jocosely seconded by the high authority of Blackwood's Magazine: "You won't pity us Scotch oatmeal-eaters any more, Mr. Cockney, we guess. Experience and science are both on our side. What makes your race-horses the best in the world may be expected to make your peasantry the best too. We offer you, therefore, a fair bet. You shall take ten English plowmen, and feed them upon two pounds and a half of wheaten flour a day, and we shall take as many Scotch plowmen, and feed them upon the same weight of oatmeal a day—if they can eat so much, for that is doubtful—and we shall back our men against yours for any sum you like. They shall walk, run, work—or fight you, if you like it, and they shall *thrash* you to your hearts' content. We should like to convince you that Scotch porridge has some real *solid* metal in it. We back the oatcake and the porridge against all the wheaten messes in the world. We defy your home-made bread, your baker's bread, your household bread, your leaven bread, and your brown Georgies—your fancy bread and your raisin bread—your baps, rolls, scones, muffins, crumpets, and cookies—your bricks, biscuits, bakes, and rusks—your Bath-buns, and your Sally Luns—your tea-cakes, and saffron-cakes, and slim-cakes, and plank cakes, and pan-cakes, and soda-cakes, and currant-cakes, and sponge cakes, and seed-cakes, and girdle-cakes, and singing-hinnies—your short-bread and your currant buns—and if there be any other names by which you designate your wheaten abominations, we defy and detest them all. We swear by the oatcake and the porridge, the substantial bannock and the brose—long may Scotland produce them, and Scotchmen live and fight upon them!"

The following articles we condense from the New Farmers' Journal:

To Make Cream Cheese.—Take one quart of very rich cream, a little soured, put in a linen cloth, and tie it as close to the cream as you can. Then hang it up to drain for two days; take it down, and carefully turn it into a clean cloth, and hang it up for two or more days; then take it down, and having put a piece of linen on a deep soup plate, turn your cheese upon it. Cover it over with your linen; keep turning it every day on a clean plate and clean cloth until it is ripe, which will be in about ten days or a fortnight, or it may be longer, as it depends on the heat of the weather. Sprinkle a little salt on the outside, when you turn it. If it is wanted to ripen quick, keep it covered with mint, or nettle leaves. The size made from a quart of cream is most convenient, but if wished larger, they can be made so.

To Preserve Butter Fresh.—The Arabs melt their butter over a slow fire, which expels all the watery particles. It will then keep without salt; and the Irish have adopted with success a similar mode for exportation to the East Indies.

Editor's Table.

ACKNOWLEDGMENTS.—To D. W. Horne, Esq., of Marianne, Florida, for seed of the Magnolia and cucumber trees. To S. H. Perry, Rec. Sec. for Premium List for 1845, of Rensselaer Co. Ag. Society; Hon. George Folsom, also Dr. D. Lee, the Chairman, for Report of the N. Y. State Assembly Committee on Agriculture; M. Tuomey, Esq., for his Report on the Geological and Agricultural Survey of South Carolina; an unknown friend, for Constitution and Proceedings of the Virginia State Ag. Soc.; Wm. H. H. Taylor, Esq., of Ohio, for Proceedings of the Hamilton Co. Ag. Soc.; A. Randall, Esq., for his Report of the Ag. Survey of Hamilton Co.; and Hon. John A. Dix, U. S. Senator from N. Y., for Mr. Ellsworth's late Report.

COLMAN'S EUROPEAN AGRICULTURAL SURVEY. We are informed by the publisher, Mr. Arthur D. Phelps, of Boston, that the THIRD PART of Mr. Colman's Survey will be out early in May. The contents of this Part are—

XXV. Agricultural Education.
1. Glas-nevin Agricultural School.
2. Templemoyle " "
3. Brookfield " "
4. Larne School.
5. School at Ealing.
6. Agricultural College.
XXVI. General Views of Agricultural Education.
XXVII. Influence of Knowledge upon Agricultural Improvement.
XXVIII. Sciences to be Taught.
XXIX. Chemical Science.
XXX. Analysis of Soils.
XXXI. Natural Science.
XXXII. Model Farm.
XXXIII. Experimental Farm.
XXXIV. Economical Arrangement at the Agricultural College.
XXXV. Plan of an Agricultural Institution for the United States.
XXXVI. Elevation of Agriculture as a Pursuit and a Profession.
XXXVII. Rural Manners in England.
XXXVIII. A Pencil Sketch.
XXXIX. Life in the Country.
XL. Veterinary College.
XLI. Museum of Economic Geology.
XLII. Chemical Agricultural Association.
XLIII. Chemical Agricultural Lectures.
XLIV. Employment of Agriculturists.
XLV. Guano.

Judging from these contents, this will be the most interesting Part yet published. Those who have not subscribed will do well to send in their names at once. Saxton & Miles, agents for New York.

The History, Structure, Economy, and Diseases of Sheep. In Three Parts. Illustrated with fine engravings. By W. C. Spooner, pp. 456. Price $2.25. London.

A Comprehensive History of the Woollen and Worsted Manufactures, and the Natural and Commercial History of Sheep, from the Earliest Records to the Present Period. By James Bischoff. London. Two vols. of over 900 pages, illustrated with superb engravings. Price $7.

Sheep, their Breeds, Management, and Diseases; to which is added the MOUNTAIN SHEPHERDS' MANUAL. Published under the superintendance of the Society for the Diffusion of Useful Knowledge. With numerous illustrations. pp. 604. Price $3.25. London.

The first two of these books have recently been published in England, and the last is a new edition. Great interest is at present excited in this country on the very important subject of sheep, and we have thought we could not do those of our readers who are concerned in them, a greater favor than to call their attention to the above works on the subject of their History, Rearing, Breeding, and Value for Wool and Mutton. These volumes before us are all standard works, and of high value. They are imported and for sale by Wiley & Putnam, 161 Broadway, N. Y.

REVIEW OF THE MARKET.

PRICES CURRENT IN NEW YORK, APRIL 26, 1845.

ASHES, Pots,	per 100 lbs.	$4 00	to	$4 12
Pearls,	do.	4 50	"	4 56
BALE ROPE,	lb.	6	"	9
BARK, Quercitron,	ton,	23 00	"	24 00
BEANS, White,	bush.	1 25	"	1 50
BEESWAX, Am. Yellow,	lb.	28	"	31
BOLT ROPE,	do.	12	"	13
BONES, ground,	bush.	35	"	40
BRISTLES, American,	lb.	25	"	65
BUTTER, Table,	do.	12	"	15
Shipping,	do.	8	"	12
CANDLES, Mould, Tallow,	do.	9	"	12
Sperm,	do.	25	"	38
Stearine,	do.	20	"	25
CHEESE,	do.	4	"	8
COAL, Anthracite,	2000 lbs.	5 00	"	6 00
CORDAGE, American,	lb.	11	"	12
COTTON,	do.	5	"	10
COTTON BAGGING, Amer. hemp,	yard,	14	"	15
American Flax,	do.	16	"	17
FEATHERS,	lb.	27	"	31
FLAX, American,	do.	7	"	8
FLOUR, Northern and Western,	bbl.	4 50	"	4 88
Fancy,	do.	5 00	"	5 50
Southern,	do.	4 50	"	4 88
Richmond City Mills,	do.	5 50	"	5 75
Rye,	do.	3 00	"	3 12
GRAIN—Wheat, Western,	bush.	1 05	"	1 12
Southern,	do.	1 00	"	1 10
Rye,	do.	66	"	67
Corn, Northern,	do.	46	"	48
Southern,	do.	44	"	46
Barley,	do.	55	"	57
Oats, Northern,	do.	29	"	30
Southern,	do.	24	"	27
GUANO,	100 lbs.	2 50	"	3 00
HAY,	do.	35	"	45
HEMP, Russia, clean,	ton,	205 00	"	210 00
American, water-rotted,	do.	105 00	"	185 00
American, dew-rotted,	do.	75 00	"	125 00
HIDES, Dry Southern,	lb.	9	"	11
HOPS,	lb.	13	"	15
HORNS,	100.	2 00	"	8 50
LEAD,	lb.	3	"	4
Sheet and bar,	do.	4	"	4
MEAL, Corn,	bbl.	2 38	"	2 56
Corn,	hhd.	11 50	"	12 00
MOLASSES, New Orleans,	gal.	32	"	33
MUSTARD, American,	lb.	16	"	31
NAVAL STORES—Tar,	bbl.	1 62	"	1 69
Pitch,	do.	80	"	1 00
Rosin,	do.	65	"	75
Turpentine,	do.	2 75	"	3 25
Spirits Turpentine, Southern,	gal.	39	"	42
OIL, Linseed, American,	do.	73	"	75
Castor,	do.	65	"	70
Lard,	do.	55	"	70
OIL CAKE,	100 lbs.	1 00	"	—
PEAS, Field,	bush.	1 25	"	1 50
PLASTER OF PARIS,	ton,	2 75	"	3 00
Ground, in bbls.,	of 350 lbs.	1 12	"	1 25
PROVISIONS—Beef, Mess,	bbl.	8 00	"	10 00
Prime,	do.	5 50	"	6 50
Smoked,	lb.	5	"	7
Rounds, in pickle,	do.	3	"	5
Pork, Mess,	bbl.	11 00	"	13 50
Prime,	do.	9 00	"	11 00
Lard,	lb.	7½	"	8¼
Bacon sides, Smoked,	do.	3	"	4
In pickle,	do.	3	"	4
Hams, Smoked,	do.	6	"	11
Pickled,	do.	4	"	7
Shoulders, Smoked,	do.	4	"	6
Pickled,	do.	3	"	4
RICE,	100 lbs.	3 12	"	3 75
SALT,	sack,	1 35	"	1 45
Common,	bush.	20	"	30
SEEDS—Clover,	lb.	6	"	7
Timothy,	7 bush.	10 00	"	12 00
Flax, rough,	do.	8 50	"	9 00
clean,	do.	11 00	"	12 00
SODA, Ash, cont'g 80 per cent. soda,	lb.	3	"	3
Sulphate Soda, ground,	do.	1	"	—
SUGAR, New Orleans,	do.	5	"	8
SUMAC, American,	ton,	25 00	"	27 50
TALLOW,	lb.	6½	"	7½
TOBACCO	do.	2	"	6
WHISKEY, American,	gal.	23	"	25
WOOL, Saxony,	lb.	45	"	60
Merino,	do.	35	"	45
Half-blood,	do.	30	"	35
Common,	do.	25	"	30

NEW YORK CATTLE MARKET—April 21.

At Market, 840 Beef Cattle (650 from the South), 100 Cows and 300 Sheep.

PRICES.—Beef Cattle, with a moderate, steady demand; there is no change in prices, viz: $5 *a* $7 for retailing sorts; unsold 75.

COWS AND CALVES.—$14*a*$24, with some at $32.

SHEEP—We continue at $1.75 to $3.50*a*$4.

HAY—A fair demand at 59*a*66c. for loose.

TO CORRESPONDENTS.—Mr. Wakeman's article with an engraving of the Berkshire will appear in our next. We are in receipt of communications from E. C. M., A Subscriber, E. P., Alexander McDonald, L., John P. Norton, F. H. Hallock, and E. M. C. Will the latter favor us with her address?

Owing to an unexpected number of advertisements, brought in at a late hour, the report of the monthly meeting of the Am. Ag. Association, the Prize List of N. Y. State Ag. Society, and several other matters in type, are left over till next month.

CENTRAL AFRICAN GUANO,

The best sample in Market, and fresh from the Island of Ichaboe.

This cargo was among the first taken from Ichaboe, and was chosen from the best on the Island, and having been brought home in tight, iron-bound casks, instead of the usual manner of transportation in bulk, its fertilizing salts were better preserved than they otherwise could be. The following is an analysis of an average sample of it, by Dr. Chilton, the most eminent analytic chemist in this city. He pronounces it to contain more phosphate of lime, and less water, than any other sample of African Guano submitted to his inspection.

Phosphate of Lime,	38·00
Phosphate of Ammonia, Carbonate of do. Urate of do. Oxalate of do.	22·94
Sulphate of Potass, &c. Chlorides of Sodium, &c.	4·17
Silica,	·58
Water,	18·65
Undetermined organic matter, containing Nitrogen,	15·26
Loss, &c.,	·40
	100·00

Price, $40 per ton, of 2,000 lbs., or $2.50 per 100 lbs., in bags.

Apply to E. D. HURLBUT & Co., 84 South street, or to

1t* A. B. ALLEN, 205 Broadway, N. Y.

PITT'S HORSE POWER THRASHER AND GRAIN CLEANER FOR SALE.

This machine will thrash and clean from 25 to 50 bushels per hour, dependent on the power used, and requires only four hands to attend to it in its operations. It may be used in the field or under cover, as most desirable, and can be easily moved from place to place. The horse power may be attached to any other machinery when not in use for the Thrasher and Cleaner. The original cost, complete, was $250; but having no further use for it, I will take $175. It is in perfect order and as good as new.

Address, post paid, HENRY WATSON,

1t* East Windsor, Conn.

HOVEY'S STRAW CUTTER FOR SALE.

The subscriber being appointed agent for this superior Straw Cutter, now offers them for sale of all sizes, and to move by hand or horse power, as may be wished. Prices vary according to size, from $12 to $35. A liberal discount to dealers.

Mr. Hovey is devoting himself exclusively to the manufacture of his Straw Cutter, and having made some recent improvements in them, it is believed that they are now the most perfect machines in market for general purposes. They have taken more premiums than any others ever exhibited at our Agricultural Shows and Fairs, and are universally admired for their strength, neatness, and the perfection and rapidity of their work. They are suitable alike for cutting straw, hay, or cornstalks.

A. B. ALLEN, 205 Broadway, N. Y.

GUANO, JUST RECEIVED FROM ICHABOE.

THE cargo of ship Shakspeare, from Ichaboe, of very superior quality, landing at the Atlantic Dock, Brooklyn. It has been well ascertained, that this Guano is superior to any other, as it brings forward crops earlier, and is equally lasting. For general farming, it will increase the crops from **30** to **50** per cent.; and for market purposes, it will enhance its value at least **200**, and in some instances **400** per cent. 300 lbs. is sufficient for an acre. For sale in lots to suit purchasers, with books directing how to use it, by E. K. COLLINS & CO.

April 12th, 1845. 56 South street, N. Y.

E. K. & Co. have also for sale the best authenticated works on Guano, proving beyond doubt that it enhances the value of all crops 30 to 75 per cent. beyond its cost, and market gardening much more, bringing forward vegetables from two to four weeks earlier. Three hundred weight is the full average quantity used per acre. It is said also to be a preventive against rust, mildew, and the fly in wheat, and rot in potatoes.

☞ The work on Guano is now ready for delivery. m1

NEW AND IMPROVED POUDRETTE.

Made by the Lodi Manufacturing Co., may be had at the office of the Company, No. 43 Liberty Street, New York, or at their Factory on the Hackensack River, in New Jersey, or by letter *post paid*, addressed to "*President of the Lodi Manufacturing Co.*, New York," or from the several agents who advertise it for sale, in the country.

Terms, *Cash on Delivery*.—For one Barrel, $2; 2 do., $3.50; 3 do., $5; 4 do., and up to 6, at $1.67 each; 7 do., $1.50, is $10.50: and $1.50 per Barrel for any greater quantity—delivered at any wharf or place in the City of New York, free of expense.

The Company have now on hand several thousand barrels of their new and improved article, composed of night soil, compounded with various other substances, every one of which is a good manure by itself.

The Poudrette made by this Company, is different from that made by any other concern in Europe or America. It contains no raw-peat, turf, or meadow mud, or any other inert substance; it is not like the old fashioned Poudrette, which will generally only last for a single crop, but its effects will last for years. It has been tried extensively for the last 2 years on Long Island, in Connecticut, New Jersey, and elsewhere, and has answered to such a degree, that already a very large increased demand for the next season has been manifested.

If used according to *directions*, it will be found *according to experiments* which have been made, to possess the following properties:—

1st. It is quicker in its operation upon vegetable matter than any *other Poudrette* or other Manure. It has ripened corn for table use in 60 days, and will ripen other crops several weeks sooner.

2d. It is more fertilizing; and its fructifying Powers are greater as proved by the increased yield; its effects are lasting, and by its powers of attraction, it absorbs from the atmosphere, humidity, ammonia, carbonic acid, and nitrogen, and retains their fertilizing properties, giving them out only as vegetation requires them for nutrition, thereby obviating the effects of a long drought.

3d. It will be found to be the richest, cheapest, and best manure now in use. *It saves in labor, its whole cost*, in comparison with the labor attending barnyard manure.

4th. Potatoes manured with Poudrette, are not subject to Rot, or other disease, as when manured with barnyard manure.

BOMMER'S METHOD OF MAKING MANURE.

One hundred agents are wanted immediately, to promote the general introduction of this valuable invention for the manufacture of Manure in New York, New Jersey, Virginia, Delaware, and in the six New England States. Unquestionable testimonials and responsible securities will be required for the faithful discharge of the duties of the appointment. Persons of suitable qualifications will find this both a useful and lucrative employment. Applications, if by mail, must be post paid, and directed to me at Westville, New Haven county, Connecticut.

Hundreds of testimonials from the best authorities, evince that no farmer who is sensible of the want of Manure, should remain destitute of this cheap and expeditious mode of its procurement. Any person forwarding five dollars, to the General Agent, with information of the writer's name, residence and address, shall be furnished with a copy of the method, with the right to use the same, without charge of postage.

ELI BARNETT, General Agent.

Westville, Conn., March 1, 1845.

HONEY BEES AND HIVES,

E. Townley, 124 Canal street, has the pleasure to inform the public that he has manufactured an entirely new and elegant Bee Hive, which has been rewarded the first premium for several successive years, and has been found, by numbers who have them now in operation, to be the most effectual preventive against the Bee Moth of any now in use.

Bees can be taught to work in glasses of various kinds, such as tumblers, jars, globes and shades. They can be adapted to family use, either in town or country; in parlors, bedrooms, attics, yards, or where fancy dictates, with perfect safety. Information can be had at the above place as to the best manner of changing bees from one hive to another, and also of making two swarms from one. And should any cause of complaint arise, it will be immediately rectified *gratis*.

Individual rights for constructing the above hive may be obtained for $5 cash, by addressing the subscriber; all letters to be post paid. Also, rights for towns, counties, or States, will be sold at liberal prices.

Also for sale, a Treatise on the cultivation and management of Honey Bees, by the subscriber. Price, 50 cents.

a1 3t EDWARD TOWNLEY.

BONE DUST FOR SALE.

Having been appointed Agent of the Portchester establishment, the subscriber will be ready at all times to supply orders for Bone Dust. It is ground entirely from fresh unbleached materials, and is of a superior quality.

Price of that of ordinary fineness, 40 cents per bushel.

Sawdust of Bones, 50 cts. per bushel.

This last is a very powerful and quick acting manure.

A. B. ALLEN, 205 Broadway, N. Y.

CATALOGUE OF
IMPROVED SHORT-HORNED CATTLE,
THE ENTIRE HERD OF E. P. PRENTICE,

To be sold at auction, at Mount Hope, near Albany, on Wednesday, the 25th day of June, 1845, at 10 o'clock, A. M.

Mr. P. takes leave to say, that if he could have made the sale sufficiently inviting, he would much have preferred to offer but about half this stock. But, to guard against the impression that the best have been selected, he begs to assure the public, that the entire herd shall be sold without reservation; except, as provided by his published advertisement, in order to retain the blood of some highly valued families, which have been secured at great expense and which could not be replaced, he will ask leave to bid, *openly*, on three or four individuals *only*, they first being designated.

☞The open numbers attached to the pedigrees, refer to Coate's Herd Book. Those inclosed in parentheses, or brackets, to this Catalogue, and the letters to the progenitors, whose pedigrees are given in the Appendix. Several of the cows and heifers, not yet calved, will come in before the sale, and at that time it will be made known when others are to do so, and by what bulls. The cattle may be inspected at any time previous to the sale, and any information relating to them will be most cheerfully given.

1. FLORA--Roan cow, calved June, 1837, and imported in 1839—got by Imperial 2151—d. Sophia, (Herd Book, vol. 3, p. 537,) by Waverly 2829—g. d. No. 21, bred by Mr. Mason, and got by Satellite 1420—g. g. d. by Cato 119—g. g. g. d. by Charles 127—g. g. g. g. d. by St. John 572. This cow is a very excellent milker.

2. CATY.—White heifer, calved July 17, 1844—got by Fairfax (49) 3754—d. Flora (1.)

3. CALF OF FLORA, (1) by Fairfax (49) 3754.

4. MOSS ROSE, vol. 5, p. 704—Roan cow, calved January, 1837, and imported in 1841—got by Barden 1674—d. Violet, by Young Colling 1843—g. 6. Violet by Remus 550—g. g. d. Pink by Sedbury 1424—g. g. g. d Beauty by Hollings 2131—g. g. g. g. d. Lingcropper by Partner 2409, &c. See Herd Book.

5. COMELY—Light roan heifer, calved February 11, 1845, got by Young Leopard, (A.)—d. Moss Rose (4) 704.

6. CATHERINE, vol. 5, p. 153—Red and white cow, calved May 17, 1839, and imported in 1841—got by Mr Jobson's Sir Robert 5181—d. Clara, by Reformer 2512—g. d. Chilton, by Don Juan 1923--g. g. d. by Lindrick 1170—g. g. g. d. by Sir Alexander, 591—g. g. g. g. d. by North Star, 459.

7. BLAIZE—Red and white bull calf, calved February 28, 1845—got by Young Leopard, (A.)—d. Catherine, (6) 153.

8. MATILDA, vol 5, p. 629—White, calved March 26, 1834—got by White Jacket 5647—d. Heart, bred by the late Thos. Hollis, Esq., at Blythe, Eng., and by him brought to this country, on his removal for settlement in ——.

Heart is said to have been a very extraordinary animal, not only in symmetry and general appearance, but in union of valuable, high bred properties. Mr. H. was offered, and refused $700 for her, on landing in New York.

Matilda took the first prize at the Fair of the Am. Institute in 1843. She has now in the yard with her, eight heifers and one bull calf, with fourteen of the next generation, and whether considered as individuals or as a family, with reference to form or quality, they are alike remarkable for combination in each, and sameness in all.

9. SNOWBALL, vol. 5, p. 629—White cow, calved May 13, 1836—got by Carlos (E.) 1787—d. Matilda (8) 629, &c.

10. NUN—Red and white cow, calved April 5, 1842—got by Leopard (D.) 4213—d. Snowball (9) 629, by Carlos, (E.) &c.

11. MELISSA, vol 5, p. 629—Red and white cow, calved April 24, 1837—got by Carlos (E.) 1787—d. Matilda, (8) 629, &c

12. CAROLINE—Red and white cow, calved April 28, 1840—got by Leopard (D.) 4213—d. Melissa (11) 629—g. d. Matilda (8) &c.

13. CORA—Red and white cow, calved March 6, 1841—got by Leopard (D.) 4213—d. Melissa (11) 629—g. d. Matilda (8) 629, &c.

14 MEG—Red and white heifer, calved June 28, 1844—got by Cato (B.)—d. Cora (13) by Leopard (D.) 4213—g. d. Melissa (11)—g. g. d. Matilda (8) 629, &c.

15. TYRO—Red and white bull calf, calved January 10, 1845—got by Young Leopard (A.)—d. Melissa (11)—g. d. Matilda (8) 629, &c.

16. DAISY, vol. 5, p. 629--Red and white cow, calved March 18, 1838--got by Leopard (D.) 4213—d. Matilda, (8) 629.

17. NELL—Red and white cow, calved January 30, 1842—got by Northumberland (F.) 4596—d. Daisy, (16) 629—g. d. Matilda (8) 629.

At the State fair, in 1842, Nell took the first premium in her class, and again did so at Poughkeepsie in 1844.

18. CALF of Daisy (16) 629--by Fairfax (49) 3751.

19. DIANA, vol. 5, p. 629—Red and white cow, calved March 15, 1839—got by Leopard (D.) 4213—d. Matilda (8) 629.

20. TECUMSEH—White bull, calved March 17, 1844—got by Cato (B.)—d. Diana (19) 629—g. d. Matilda (8) 629.

21. BETTY—Red and white heifer calf, calved Dec. 5, 1844—got by Sultan (C.)—d. Diana (19)--g. d. Matilda (8.) 629.

22. SALLY, vol. 5, p. 629—Red and white cow, calved January 18, 1840—got by Leopard (D.) 4213—d. Matilda (8) 629.

23. DUTCHESS—White cow, calved May 11, 1842—got by Fairfax (49) 3754—d. Sally (22) 620—g. d. Matilda (9) 629.

24. CALF OF (23)—by O'Connell [50] vol. 5., p. 704.

25. ROVER—Red and white heifer, calved May 30, 1844—got by Young Leopard, (A.)—d. Sally, [22] 629—g. d. Matilda, [8] 629.

26. CHARLOTTE—Red and white cow, calved November 16, 1840—got by Leopard, [D.] 4213—d. Matilda, [8] 626.

27. CALF OF [26]—by Fairfax, [49] 3754.

28. ADA, vol. 5, p. 629—Red and white cow, calved October 16, 1841—got by Leopard, [D.] 4213—d. Matilda, [8] 629.

29. CALF OF [28]—by Fairfax, [49] 3754.

30. JUDY—White heifer, calved January 28, 1844—got by Fairfax, [49] 3754—d. Matilda, [8] 629.

31. DUKE—Red and white bull, calved January 4, 1845—got by Fairfax, [49] 3754—d. Matilda, [8] 626.

32. APPOLONIA, vol. 5, p. 43—Red and white cow, calved January 26, 1835, and imported in 1838—got by Albion, 2965—d. by Red Star, 4911—g. d. by Chance, 1806—g. g. d. by Shipperly, 2619.

Appolonia is a very extraordinary milker, giving from 24 to 30 qts. a day for months in succession, and never drying before parturition without great care and effort.

33. LOUISA—Roan cow, calved January 28, 1840—got by Leopard, [D.] 4213—d. Appolonia, [32] 43.

34. BURLEY—Red and white heifer, calved May 11, 1844—got by Young Leopard [A.]—d. Appolonia, [32] 43. So far as dam and sire are concerned, this must be all that can be desired for the dairy.

35. SPLENDOR—Roan cow, calved May 7, 1836, and imported in 1839, vol. 5, p. 959—got by Symmetry, 2723—d. Pomona, (bred by Mr. Cattley,) by Bedford Junior, 1701—g. d. by Isaac, 1129—g. g. d. by Whitworth, 1584—g. g. g. d. by White Comet, 1582—g. g. g. g. d. by a son of Kit, 2179.

Splendor is a deep milker, giving from 24 to 30 qts. a day through the favorable season. She is the dam of Fairfax, [49] 3754.

36. PEGGY, vol. 5, p. 959—Roan cow, calved April 4, 1842—got by Leopard, [D.] 4213—d. Splendor, [35] 959.

Peggy is now with her first calf, (Peggy 2d,) and gives great promise of milk.

37. PEGGY 2d—Roan heifer calf, calved February 26, 1845—got by Fairfax, [49] 3754—d. Peggy [36] 959.

38. RAMBLE—Red and white heifer, calved May 31, 1844—got by Young Leopard, [A.]—d. Splendor, [35] 959.

39. CALF of Splendor, [35] by Fairfax, [49] 3754.

40. ESTERVILLE, vol. 5, p. 329—Roan cow, calved Nov. 13, 1841—got in Eng. by Daniel O'Connell, 3557—d. Esterville 329, (imported in 1841,) by Alfred 2987, (afterwards sold to the King of the French,)—g. d. Amethyst, by Prince of Northumberland, 4826—g. g. d. Young Amazon, by Crusader, 934—g. g. g. d. Amazon, by Sultan, 1485—g. g. g. d. Bellona, by Mars, 411—g. g. g. g. g. d. Rolla, by North Star, 454. Bulled by Fairfax.

41. JENNY—Roan cow, calved June 12, 1841—got by Red Comet—d. Miss Scotson, alias Daisy, [bred by Samuel Scotson, at Toxteth Park, in England, and imported in 1840,] by Henwood, 4012.

Red Comet was out of Red Rose, by Young Albrin, [imported by Thos. Addis Emmet, of New York,] by Harlem Comet—g. d. by Sir Martin.

42. JILT—Roan heifer, calved August 16, 1844—got by Sultan [C.]—d. Jenny [41].

43. Calf of Jenny, [41] by Fairfax, [49] 3754.

44. AURORA, vol. 3, p. 258—Roan cow, calved May 24, 1835—imported in 1838,—got by William, 2839—d. Adelaide, 258, by Young Rockingham 2549—g. d. by Wellington, 2324—g. g. d. by Major, 2252—g. g. g. d. by Northumberland, 464.

Aurora is a great and rich milker.

45. TIMOUR—White bull calf, calved July 19, 1844—got by Fairfax, [49] 3754—d. Aurora, [44] 258.

46. Calf of Aurora [44]—by Fairfax, [49] 3754.

47. DORA—Red and white cow, calved April 28, 1841—got by Leopard, [D.] 4213—d the imported cow, Princess, (bred by R. C. Lounds, Esq.,) by Henry, 4008—g. d. Beauty, by Fitz Form, 2024—g. g. d White Princess, (bred by Mr. Hines,) by Cupid, 638—g. g. g. d. Young Princess, by Lionel, 1171, &c. See Herd Book, vol. 5, p. 805.

48. MISS SMITH—Red and white cow, calved August 10, 1837—got by Leopard, [D.] 4213—d. the imported cow, Susan, by Dutchman—g. d. Rosina, by Mr. Wetherell's North Star—g. g. d. by Old Comet. See appendix A.

49. FAIRFAX 3754—White bull, calved May 10, 1840—got in England, by Sir Thos. Fairfax, 5196—d. Splendor, [35] 959, by Symmetry, 2723—g. d. by Bedford, Jun., 1701—g. g. d. by Isaac, 1129—g. g. g. d. by Whitworth, 1584—g. g. g. g. d. by White Comet, 1583—g. g. g. g. g. d. by a son of Kit, 2179.

Fairfax took the first prize, as the best two year old, at the Fair of the State Agricultural Society in 1842; and the first, as the best bull of any age, at that of the American Institute, the same year.

He has not since been shown, but has been kept low, and at service. His dam, Splendor [35], is a very superior dairy cow. His sire, Sir Thos. Fairfax, was got by Norfolk, 2377—d. Miss Fairfax, p. 509, vol. 3, Herd Book, by Fairfax, 1023—g. d. Lilly, by Young Warlaby, 2312—g. g. d. by Young Dimple, 971—g. g. g. d. by Snowball—g. g. g. g. d. by Layton, a son of Mr. Charge's grey bull, 872.

"Sir Thos. Fairfax" has taken the following premiums, viz. at

the best year old bull, at Otley, in April, 1838, three [3] guineas; as the best two year old, at Leeds, in 1839, twenty sovereigns; [at the same time, he won a match of 5 guineas, against Mr. Tempest's celebrated bull, "Dan'l O'Connell," which obtained the first prize, as the best bull of any age at the above meeting;] also, as the best bull of any age at the Yorkshire meeting, in August, 1840, the premium of 30 sovereigns; at the same time, beating that noted bull, Clementi, in a match of five guineas each, and has never been beaten.

Most of the cows named in this Catalogue, are bulled by Fairfax, 3754.

50. O'CONNELL—Roan bull, calved January 11, 1842, vol. 5, p. 704—got in England, by Sir Peter, 5173—d. Moss Rose, 704, by Barden, 1674—g. d. Violet, by Young Colling, 1843—g. g. d. Violet, by Remus, 530—g. g. g. d. Pink, by Sedbury, 1421—g. g. g. g. d. Beauty, by Hollings, 2131—g. g. g. g. g. d. Lingcropper, by Partner, 2409—g. g. g. g. g. g. d. Lady, by Holling's bull, 2148—g. g. g. g. g. g. g. d. Lingcropper, by Marsk, 418, &c.

APPENDIX.

A.

YOUNG LEOPARD—Red and white, calved Oct. 5, 1838—got by Leopard, [D.] 4213—d. the imported cow, Susan, by Dutchman—g. d. Rosina, by Mr. Wetherell's North Star—g. g. d. by Old Comet.

Susan was bred by Mr. John Singleton, at Elmsthorp, England, and imported in 1832, with the bull Copson. She was a very extraordinary milker, giving from 30 to 35 quarts a day, for several weeks in succession.

B.

CATO—White bull, calved May 3, 1842—got by Fairfax, [49] 3754—d. Diana [19] 629, by Leopard, [D.] 4213, &c.

Cato took the first premium in his class, at the State Fair, in 1842, and also at the American Institute, the same year. He has not since been shown. Was calved after the papers were sent forward for the last volume of the Herd Book.

C.

SULTAN—Roan bull, calved July 24, 1842—got by Astoria, 3048—d. Flora [1], (imported in 1839,) by Imperial, 2151—g. d. Sophia, vol. 3, p. 537.

D.

LEOPARD, 4213—Red and white spotted bull, calved in 1832; bred by Gen. Stephen Van Rensselaer—got by Ajax, 2944—d. Beauty, by Washington, 1566—g. d. Red Lady, by Washington, 1566—g. g. d. Pansy, by Blaize, 76.

E.

CARLOS, 1787—By Charles, 878—d. Galatea, by Frederick, 1060—g. d. Graceful, by Major, 2252—g. g. d. Graceful, by Comus—g. g. g. d. Graceful, by Denton, 198.

F.

NORTHUMBERLAND, 4596—Red and white bull, calved in 1839—got in England, by Prince of Northumberland, 4826—d. Appolonia [32] 43, by Albion, 2065, a son of Scipio, 1421—g. d. by Red Star—g. g. d. by Chance, 1806—g. g. g. d. by Shipperley, 5120.

SALE OF FULL BLOODED NORMAN HORSES.

The subscriber having relinquished farming, will offer at public vendue, at his farm in Moorestown, Burlington county, New Jersey, nine miles from Philadelphia, on Tuesday, the 20th of May next, his entire stock of NORMAN HORSES, consisting of two imported Stallions, "Diligence" and "Buonaparte;" two imported mares—three full-blooded stud colts, one, two and four years old—two full-blooded Fillies, three and four years old—two Fillies by "Diligence," from a half-blood Canadian Mare, three and four years old, and one Filly four years old, by Diligence," from a well-bred English Mare, broke and kind to harness.

The undersigned deems it unnecessary to speak at large of the qualities of these horses, so much having been said of this particular importation (which is believed to be the only one ever made to the United States), in all the principal Agricultural papers. In a few words, they are the *Canada* Horse, on a larger scale, combining the form, activity and hardihood of that well known race, with greater size and strength. "Diligence" has been a remarkably successful Stallion; he has been exhibited at the Fairs of the Pennsylvania and New York Agricultural Societies, where he was not entitled to compete for the premiums, but received the highest encomiums from the Committees. At the Fair of the American Institute, in New York City, in October last, he received the Silver Medal of the Institute.

It is expected that a large number of the Colts of "Diligence" will be on the ground on the day of sale, some of which, no doubt, may be purchased. EDWARD HARRIS.

Moorestown, Burlington Co., N. J. }
March 15th, 1845. } a1 2t

AGENCY FOR THE AMERICAN AGRICULTURIST.

Mr. Alonzo Sherman, of Trumbull, Fairfield County, Connecticut, is hereby appointed General Agent of the American Agriculturist, with authority to appoint Sub-Agents in any part of the United States; and we hereby recommend him to the attention of our friends wherever he may go, and hope they will extend such aid and assistance to him, as will forward the object in which he is engaged.

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The Farm in West Groton, known as 60 acres in the North East corner of Lot No. 63 Locke, consisting of a Farm House nearly new, Barn, and about Forty acres of improvement surrounded by a good fence, and now occupied by Robert Armstrong. Price, $1,500. One Thousand Dollars can remain on Mortgage for Ten years, at legal interest, half yearly.

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The Farm known as the State 100 acres in the South East corner of Lot No 2, Cicero, about a mile from the town of Brewerton, on the outlet of Oneida Lake, consisting of an improvement of 40 acres fenced, with log buildings, and 60 acres of Woodlands.

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The Farm known as the State 100 acres in the South East corner of Lot No. 54 Hannibal, a short distance from the town of Fulton, on the Oswego River, good woodland, with a small clearing.

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" " Survey	50	acres	"	"	"	"	25	"
" " "	50	"	"	"	"	"	29	"
" " "	50	"	"	N. W.	"	"	36	"
" " "	50	"	"	N. E.	"	"	39	"
" " "	50	"	"	S. E.	"	"	58	"
" " Sub. 1	83	"	"		"	of lot	76	"
" " " 7	30	"	"		"	"	"	"
" " Survey	50	"	"	N. W.	cor. of	"	98	"
" " State	100	"	"	S. E.	of	"	65	Virgil
" " Survey	50	"	"	N. E.	"	"	68	"
" " "	50	"	"	N. W.	"	"	69	

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☞ Such papers as we send the above advertisement to marked, will please give it three insertions, and send bill to this office.
a1 3t

PREMIUM EAGLE, SUBSOIL, AND OTHER PLOWS.

The subscriber having been appointed sole agent in this city for the sale of the celebrated Premium Plows, made by Ruggles, Nourse & Mason, of Worcester, Massachusetts, now offers them at the manufacturers' home prices. They are calculated alike for the Northern Farmer and Southern Planter, and embrace all varieties. Price from $3 50 to $11 50.

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NEW AND IMPROVED DRILLING MACHINE.
This is calculated for sowing all kinds of seeds. Price $10.

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IMPORTANT SALE OF FIRST-CLASS SHORT-HORNS.

MR. WETHERELL will sell by auction, without reserve, at WISETON, near BAWTRY, NOTTINGHAMSHIRE, on SATURDAY, the 13th day of SEPTEMBER next, about FIFTY COWS and HEIFERS, and about EIGHT BULLS and BULL CALVES (including the Bull Wizard), the property of the Right Hon. Earl Spencer.

This sale presents to breeders of first-class Short-Horns of the purest blood an opportunity not to be lost; and, for the satisfaction of purchasers that a fair average of the herd will be selected for sale, Mr. Wetherell takes this opportunity of giving a copy of a letter he has received from his lordship in answer to his inquiries as to the animals for sale:—

"Wiseton, February 17, 1845.

"Sir,—You ask me what is the sort of sale I intend to have. I had long endeavored to raise the number of my breeding cows and heifers to 100. I succeeded in this about three years ago; but I find, from the experience I have had since, that my farm here is not equal to carry so many. Even, indeed, if it was, I should be very much overstocked, as by next September I shall probably have 132 cows and heifers old enough to breed from, and between 60 and 70 younger heifers. I intend, therefore, to offer about 50 cows and heifers, and some bulls, to be sold by auction, on the 13th of September. I intend that those offered should be a fair sample of my herd—some as good as any I keep for myself—and I shall also keep several for myself not so good as the worst I offer for sale. They will not all have long pedigrees, but as large a proportion of them will as there ever has been in my general herd. In short, my endeavor will be, as I have said, to make those offered for sale a fair average sample of the whole number I now have.

"I am, sir, yours, &c., SPENCER."

Catalogues, with every information, will be ready by the early part of July, and may be had gratis, on application to Mr. Hall, Wiseton, or to Mr. Wetherell, Durham.

Durham, England, 20th February, 1845.

VERY IMPORTANT SALE OF FITST CLASS SHORT-HORNED CATTLE.

MR. WETHERELL will sell by auction, without reserve, at GATE BURTON, NEAR GAINSBOROUGH, LINCOLNSHIRE, ON FRIDAY, the 12th of SEPTEMBER, the entire HERD of SHORT-HORNED CATTLE, the property of Wm. Hutton, Esq.; consisting of upwards of 60 Bulls, Cows, and Heifers, of different ages, which are principally descended from the following first-class Bulls, viz.:—Sir Henry (1446), Cossack (1880), Rockingham (2550), Ganthorpe (2049), Gracchus (3917), and Lictor (6128.)

Durham, England, Feb. 25, 1845.

EXTENSIVE AND IMPORTANT SALE OF FIRST RATE SHORT-HORNED CATTLE.

MR. WETHERELL will sell by auction, without reserve, at WALKERINGHAM, near BAWTRY, NOTTINGHAMSHIRE, on MONDAY, the 15th of SEPTEMBER next, the entire HERD of SHORT-HORNS, the property of Mr. Henry Watson, consisting of upwards of 60 Cows, Heifers, and Bulls, of different ages, including the well known bull Lord Adolphus Fairfax, and many of his progeny.

Durham, England, Feb. 20, 1845.

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Flushing, May 1st, 1845. m1 1t

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Northampton, Mass., April 10, 1845. D. STEBBINS.

m1 1t*

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For sale, a few bags of a very choice article of Peruvian Guano, direct from the island of Chincha. Price $3 per 100 lbs.

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